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M-X BASING AREA ANALYSIS PROCESS

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Distribution Statement A
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THIS BRIEFING SUMMARIZES THE ANALYSIS OF POTENTIAL M-X BASING AREAS. A MORE DETAILED DESCRIPTION WAS PUBLISHED IN THE DRAFT M-X ENVIRONMENTAL IMPACT STATEMENT.

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PURPOSE

THIS BRIEFING DESCRIBES THE M-X BASING AREA SELECTION PROCESS--A CONTINUING PROCESS ENTAILING THE SUCCESSIVE APPLICATION OF SEVERAL SETS OF SCREENING CRITERIA AND THE IDENTIFICATION OF UNACCEPTABLE OR UNREASONABLE BASING AREAS FOR THE M-X MISSILE IN MULTIPLE PROTECTIVE STRUCTURES (MPS). THE PROCESS BEGAN IN JANUARY 1977 WITH CRITERIA INVOLVING GEOTECHNICAL, CULTURAL, SAFETY, AND OTHER CONCERNS.

AS THE DEPTH OF THE ANALYSES INCREASES, THE BREADTH MAY DECREASE AS ACCUMULATED INFORMATION SHOWS THAT SOME ALTERNATIVES ARE UNREASONABLE. BY THIS PROCESS, THE AIR FORCE BALANCES A VARIETY OF CONCERNS--ENVIRONMENTAL AND SOCIOECONOMIC IMPACTS, MILITARY EFFICIENCY, SCHEDULE RISK, ETC. EACH STAGE OF THE SCREENING EMPLOYS CRITERIA WHICH, LIKE MOST CRITERIA, INVOLVE JUDGMENT. CLEAR BREAKPOINTS ARE UNUSUAL, BUT THE PREFERRED DIRECTION IS USUALLY OBVIOUS, AND UNREASONABLE ALTERNATIVES ARE NORMALLY EASY TO DISTINGUISH.

THE PAPER CONCENTRATES ON MILITARY CONSIDERATIONS WHICH WERE RECENTLY INCORPORATED INTO THE DECISION PROCESS. BY EXAMINING SUCH FACTORS AS SURVIVABILITY, POTENTIAL NEW THREATS, VERIFICATION, PRESERVATION OF MISSILE LOCATION UNCERTAINTY, AND INTERACTION WITH OTHER STRATEGIC FORCES, DEPLOYMENT CRITERIA WERE DEVELOPED AND USED TO MINIMIZE ACTUAL AND POTENTIAL VULNERABILITIES, PROTECT AGAINST UNPREDICTABLE CHANGES, AND MINIMIZE RESOURCE REQUIREMENTS.

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PURPOSE

DESCRIBE THE M-X BASING AREA SELECTION PROCESS WITH EMPHASIS ON RECENT SELECTION OF THE NEVADA-UTAH AND WEST TEXAS - NEW MEXICO AREAS FOR IN-DEPTH ENVIRONMENTAL ANALYSIS

OUTLINE

TO PROVIDE A FOUNDATION FOR RECENT BASING AREA DECISIONS, BACKGROUND INFORMATION WILL BE PRESENTED TO EXPLAIN THE NEED FOR M-X, DESCRIBE THE CURRENT BASING CONCEPT, AND OUTLINE THE M-X ENVIRONMENTAL PROCESS.

THE RATIONALE FOR MILITARY SCREENING CRITERIAL WILL BE DEVELOPED, AND THE RESULTS OF APPLYING THE SCREENING CRITERIA TO POTENTIAL M-X BASING AREAS WILL BE PRESENTED.

OUTLINE

- BACKGROUND
  - NEED FOR M-X
  - CURRENT BASING CONCEPT
  - M-X ENVIRONMENTAL PROCESS
- SCREENING CRITERIA
- APPLICATION OF CRITERIA

NEED FOR M-X

DUE TO THE CONTINUING SOVIET STRATEGIC BUILDUP, THE US FACES A STRATEGIC IMBALANCE DURING THE 1990S THAT WILL SERIOUSLY IMPAIR ITS ABILITY TO DETER HOSTILE SOVIET ACTIONS AT ALL LEVELS. THE DEPLOYMENT OF M-X IS CRITICAL TO RESTORING MILITARY BALANCE AND ESSENTIAL EQUIVALENCE AND, AS SUCH, THE DEPARTMENT OF DEFENSE CONSIDERS IT THE HIGHEST PRIORITY DEFENSE PROGRAM. THE NATIONAL IMPORTANCE OF THE PROGRAM AND THE CRITICALITY OF ITS SCHEDULE HAVE BEEN CONFIRMED BY BOTH THE ADMINISTRATION AND CONGRESS.

THE GREATEST DANGER THE US WILL FACE IN THE STRATEGIC AREA IS THE CAPABILITY THE SOVIETS WILL HAVE BY THE EARLY 1980S TO DESTROY A LARGE PORTION OF US INTERCONTINENTAL BALLISTIC MISSILES (ICBMS) USING ONLY A RELATIVELY SMALL PORTION OF THEIR ICBMS. SOVIET DOCTRINE HOLDS THAT, IF THEY BELIEVE WAR TO BE IMMINENT, THEN PREEMPTIVE COUNTERFORCE ATTACKS SHOULD BE LAUNCHED TO LIMIT DAMAGE TO THE SOVIET UNION. HENCE, THE VULNERABILITY OF US ICBMS NOT ONLY REDUCES THE US RETALIATORY CAPABILITY, BUT IT IS ALSO DESTABILIZING IN CRISIS SITUATIONS BECAUSE IT INCREASES THE SOVIETS' CONFIDENCE IN THEIR ABILITY TO EXECUTE AN EFFECTIVE COUNTERFORCE STRIKE.

NEED FOR M-X

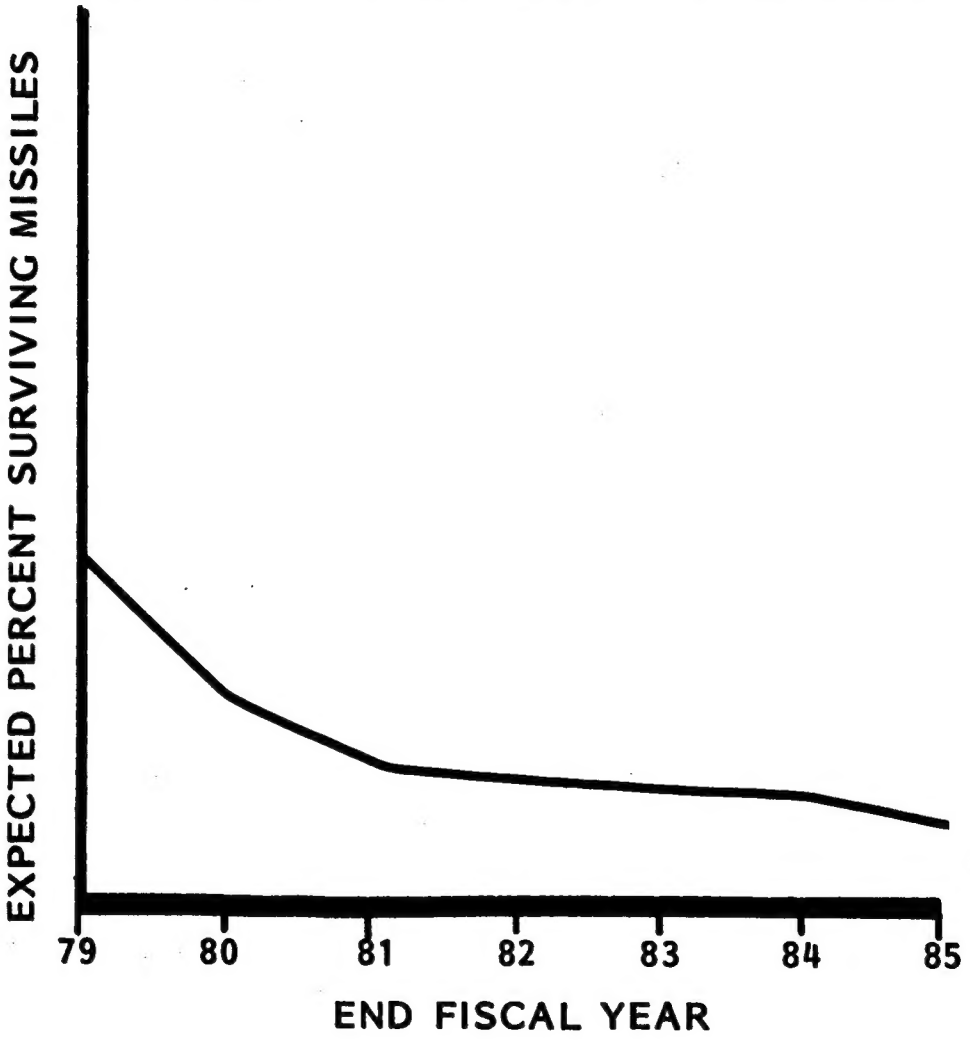
- SOVIET ARMS BUILDUP
- STRATEGIC IMBALANCE
- RESTORATION OF ESSENTIAL EQUIVALENCE WITH A SURVIVABLE US ICBM FORCE
  - SECURE RETALIATORY FORCE
  - CRISIS STABILITY

US ICBM SILO SURVIVABILITY

THIS CHART ILLUSTRATES THE DECLINING SURVIVABILITY OF THE CURRENT US ICBM FORCE. ALL AVAILABLE EVIDENCE INDICATES THAT TARGETING US ICBM SILOS CONTINUES TO BE A HIGH SOVIET PRIORITY, AND THE NUMBERS OF HIGH QUALITY WARHEADS ON SOVIET SS-18S AND SS-19S POSE A SERIOUS THREAT TO US SILO SURVIVABILITY.

THE HIGHEST PRIORITY US STRATEGIC INITIATIVE IS TO REDUCE THIS VULNERABILITY, THROUGH THE DEPLOYMENT OF THE M-X MISSILE SYSTEM.

U.S. ICBM SILO SURVIVABILITY



STRATEGIC WEAPON RATIO COMPARISON

THE DECLINE IN US ICBM SURVIVABILITY IN THE FACE OF THE CONTINUING SOVIET STRATEGIC BUILDUP IS REFLECTED IN THIS COMPARISON OF US AND SOVIET STRATEGIC WEAPONS AFTER A SOVIET SURPRISE ATTACK, INCLUDING ICBMS, SEA LAUNCHED BALLISTIC MISSILES, AND BOMBERS.

IN 1975 THE US ENJOYED OVERWHELMING NUCLEAR SUPERIORITY--A SUPERIORITY THAT SERVED TO DETER NUCLEAR WAR AS WELL AS RESTRAIN SOVIET ACTIONS AT LOWER LEVELS OF CONFLICT.

BY THE LATE 1970s, A CONDITION OF ESSENTIAL EQUIVALENCE EVOLVED, BUT SOVIET ARMS MOMENTUM CONTINUED UNABATED. WITH DECLINING ICBM SURVIVABILITY, THE US FACES A STRATEGIC IMBALANCE IN THE 1980s THAT WILL NOT BE CORRECTED UNTIL M-X IS FIELDED. THE PROGRAMMED DEPLOYMENT OF AIR LAUNCHED CRUISE MISSILES AND TRIDENT SUBMARINES WILL SLOW THE DECLINE IN RELATIVE FORCE CAPABILITIES, BUT THE TREND WILL NOT BE REVERSED UNTIL M-X DEPLOYMENT BEGINS IN 1986.

AS SHOWN ON THE RIGHT SIDE OF THE CHART, ANY DELAY IN M-X DEPLOYMENT WILL EXTEND THE PERIOD WHERE THE SOVIETS WILL ENJOY AN ADVANTAGE.

STRATEGIC WEAPON RATIO COMPARISON (CONTINUED)

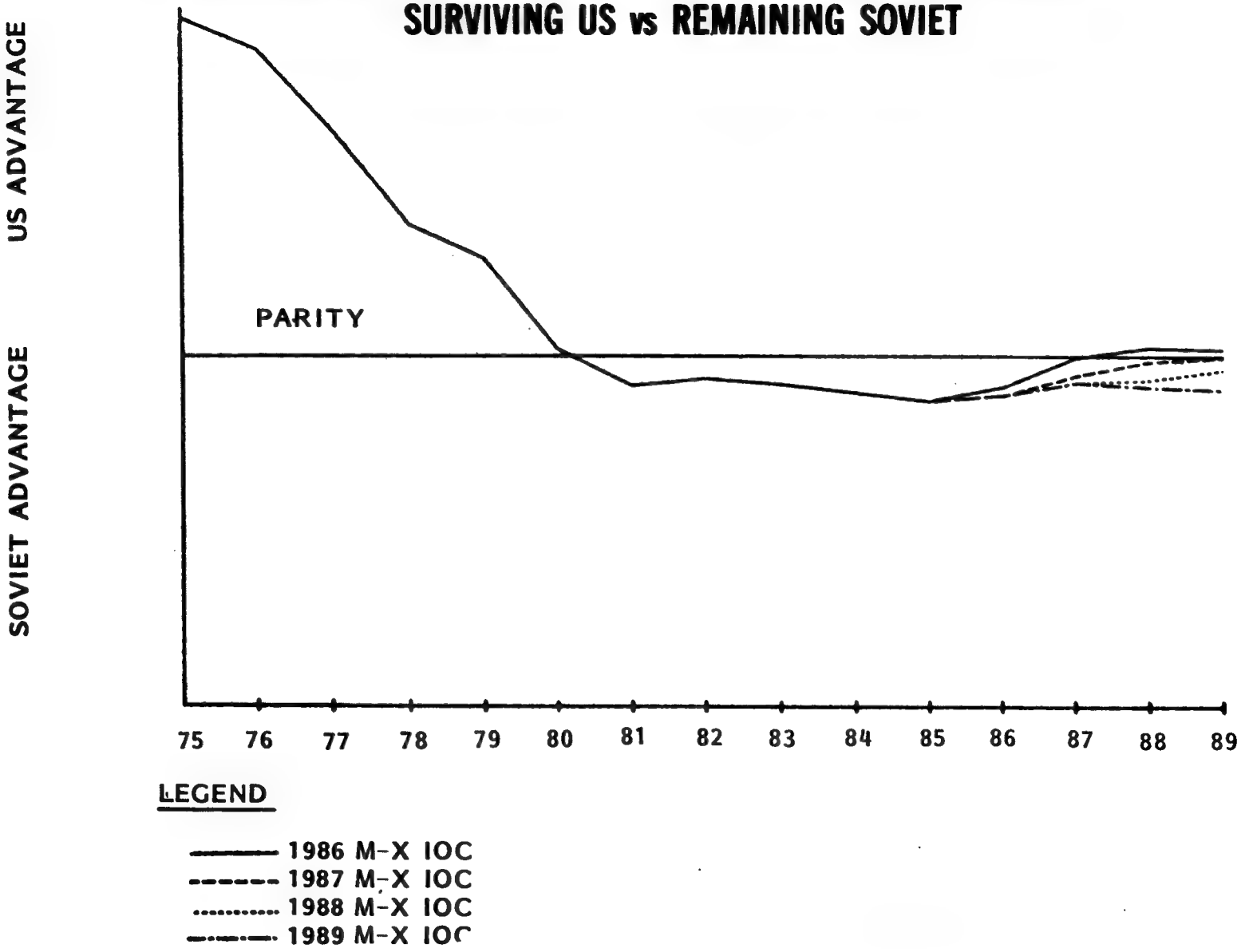
THERE ARE SEVERAL IMPORTANT POINTS THAT ARE NOT EVIDENT FROM THE CHART.

- THE SOVIET ADVANTAGE IN THE 1980S APPEARS SMALL ON THE CHART BECAUSE THE US ADVANTAGE IN WEAPONS IN THE MID-1970S WAS VERY LARGE. HOWEVER, THE EARLY US ADVANTAGE WAS BASED ON FORCES WITH A LARGE NUMBER OF LOW YIELD, INACCURATE SEA LAUNCHED BALLISTIC MISSILE WEAPONS COMPARED WITH SOVIET FORCES THAT HAD MUCH LESS CAPABILITY THAN THOSE THEY ARE NOW DEPLOYING.

- ICBMS, WITH THEIR TIME URGENT, HARD TARGET KILL CAPABILITY, ARE THE ONLY STRATEGIC WEAPONS THAT CAN COVER THE FULL SPECTRUM OF TARGETS. BECAUSE THE SOVIETS HAVE OVER THREE FOURTHS OF THEIR STRATEGIC WEAPONS ON ICBMS, THEIR ADVANTAGE IN THE 1980S WILL BE BASED ON A PREPONDERANCE OF WEAPONS WITH A SUPERIOR WAR FIGHTING CAPABILITY.

- BEFORE M-X DEPLOYMENT, THE SOVIETS WILL BE ABLE TO TARGET US ICBMS WITH ONLY A SMALL FRACTION OF ITS ICBM RESOURCES. AFTER M-X DEPLOYMENT, THE SOVIETS COULD EXHAUST THEIR ICBM RESOURCES AND STILL NOT BE ABLE TO TARGET ALL US ICBMS. THIS IMPORTANT ATTRIBUTE OF M-X, AND ITS CONTRIBUTION TO DETERRENCE, WILL BE EXPLAINED NEXT.

STRATEGIC WEAPON RATIO COMPARISON
AFTER SOVIET COUNTERFORCE FIRST STRIKE
SURVIVING US vs REMAINING SOVIET



M-X BASELINE

TO PROVIDE THE NECESSARY SURVIVABILITY IN RESPONSE TO THE PROJECTED SOVIET THREAT, 200 MISSILES WILL BE DEPLOYED IN 4600 SHELTERS. THE LOCATION OF THE MISSILES WILL BE CONCEALED, SO THE SOVIETS WOULD HAVE TO ATTACK ALL SHELTERS TO DESTROY THE M-X. HOWEVER, THE NUMBER OF SHELTERS WOULD BE SUCH THAT THE SOVIET UNION WOULD ESSENTIALLY EXHAUST ITS ICBM RESOURCES IN THE ATTACK AND STILL LEAVE SUFFICIENT SURVIVING US ICBMs FOR A MEANINGFUL US RETALIATION. IN ADDITION, BACKUP SURVIVABILITY MODES WILL BE AVAILABLE TO HEDGE AGAINST THREAT INCREASES OR UNEXPECTED SOVIET CAPABILITIES TO REDUCE THE EFFECTIVENESS OF CONCEALMENT PROCEDURES.

M-X BASELINE

- 200 MISSILES CONCEALED IN 4600 SHELTERS
- BACKUP MOBILITY MODES
- BMD OPTION

VERIFIABLE HORIZONTAL MPS--SHELTER SITE

THE PROTECTIVE SHELTER HOUSES, PROTECTS, AND CONCEALS THE MISSILE/LAUNCHER. EACH OF THE 4,600 SHELTERS IS A REINFORCED-CONCRETE, STEEL-LINED CYLINDER WITH A CONCRETE AND STEEL DOOR. EACH SHELTER IS BURIED UNDER 5 FEET OF EARTH. TWO PLUGS IN THE ROOF OF THE SHELTER CAN BE REMOVED BY CRANE TO PERMIT VERIFICATION OF SHELTER CONTENTS BY SATELLITES. RESIDENT OPERATIONAL SUPPORT EQUIPMENT (ROSE) IS LOCATED ADJACENT TO EACH SHELTER.

THE SHELTER SITE IS APPROXIMATELY 2.5 ACRES AND IS ENCLOSED BY A LIVESTOCK FENCE. SHELTER SITE SECURITY IS PROVIDED BY INTRUSION SENSORS AND OTHER PHYSICAL SECURITY DEVICES WHICH CAN BE REMOTELY MONITORED.

THERE ARE 23 SHELTERS PER M-X MISSILE, WITH THE MISSILE LOCATION CONCEALED. THE OTHER 22 SHELTERS WILL CONTAIN MASS SIMULATORS TO MINIMIZE ANY SIGNATURES THAT COULD BE USED TO HELP DETERMINE MISSILE LOCATION.

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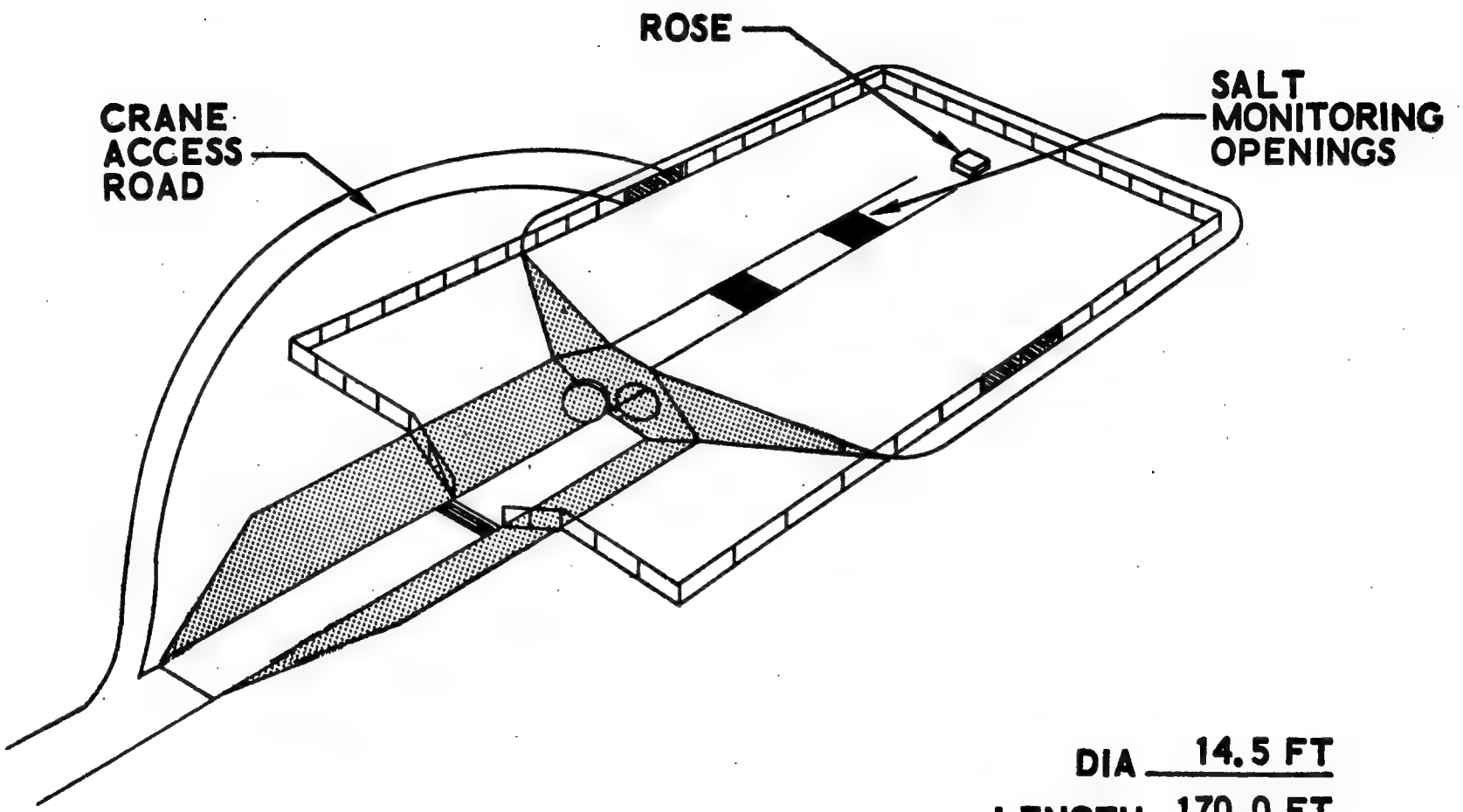
VERIFIABLE HORIZONTAL MPS--SHELTER SITE



DIA 14.5 FT

LENGTH 170.0 FT

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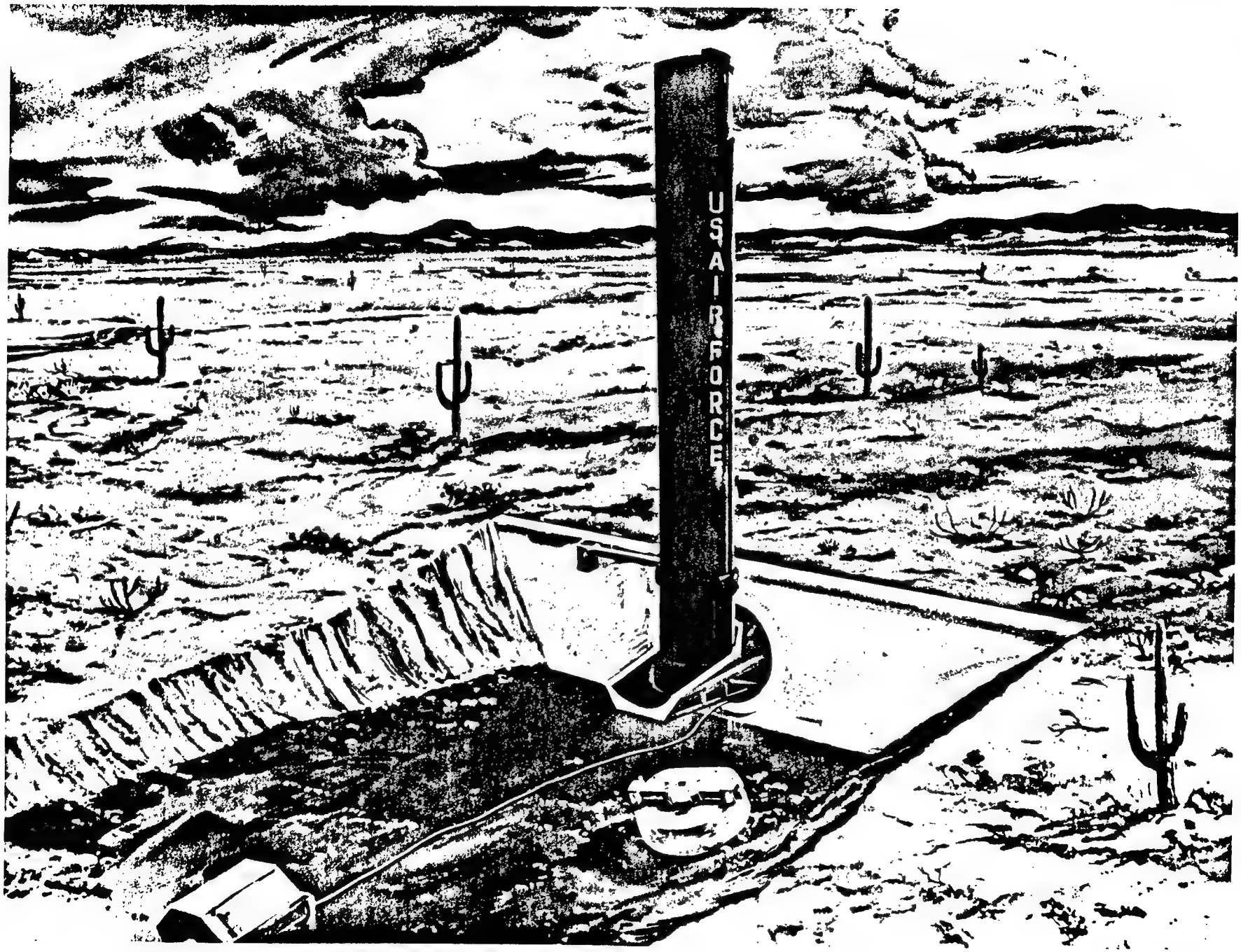
MX HORIZONTAL MPS SYSTEM--PLOWOUT LAUNCH

THE MX MISSILE WILL BE ENCLOSED IN A CANISTER WHICH PROVIDES A CONTROLLED OPERATING ENVIRONMENT. IT ATTACHES TO A LAUNCHER WHICH PROVIDES ERECTION AND LAUNCH CAPABILITY. FOR LAUNCH, THE CANISTERIZED MISSILE AND LAUNCHER EMERGES PARTIALLY FROM THE SHELTER. THE CANISTER PORTION OF THE LAUNCHER IS THEN ERECTED TO NEAR-VERTICAL, AND THE MISSILE IS LAUNCHED.

THE MISSILE IS 70 FT LONG, 92 IN. IN DIAMETER AND WEIGHS APPROXIMATELY 190,000 LBS. IT HAS FOUR STAGES, THE FIRST THREE USE SOLID FUEL, AND THE FOURTH, THE POST BOOST VEHICLE, USES LIQUID FUEL. IT CARRIES TEN REENTRY VEHICLES OF THE SAME TYPE CURRENTLY BEING DEPLOYED ON A PORTION OF THE MINUTEMAN III STRATEGIC MISSILE FORCE.

THE MX MISSILE WILL BE APPROXIMATELY TWO-THIRDS THE SIZE OF THE US TITAN II MISSILE AND ABOUT ONE-HALF THE SIZE OF THE SOVIET SS-18.

MX HORIZONTAL MPS SYSTEM--PLOWOUT LAUNCH



HORIZONTAL SHELTER--SEPARATE TRANSPORTER AND MOBILE LAUNCHER

SYSTEM OPERATION BEGINS AS THE SYSTEM IS BEING FIELDED AND CONTINUES THROUGH THE LIFE OF THE SYSTEM. TO BEGIN OPERATION, MISSILE AND LAUNCHER COMPONENTS WILL BE SHIPPED TO THE DESIGNATED ASSEMBLY AREA WHERE TEAMS WILL ASSEMBLE AND INTEGRATE THE MISSILE AND LAUNCHER IN THE MISSILE ASSEMBLY FACILITIES. THIS BUILDUP PROCESS WILL TAKE ABOUT A WEEK FOR EACH MISSILE. ONCE ASSEMBLED, THE MISSILE AND LAUNCHER IS SENT TO THE FINAL ASSEMBLY AREA AT THE CLUSTER MAINTENANCE FACILITY BY A SPECIAL TRANSPORT VEHICLE OVER THE DESIGNATED TRANSPORTATION NETWORK (DTN). THIS MOVEMENT OF THE LAUNCHER WILL REQUIRE SECURITY ESCORT TO PROTECT THE MISSILE COMPONENTS AND TO DIRECT TRAFFIC FOR PUBLIC SAFETY.

ONCE THE LAUNCHER IS AT THE CLUSTER MAINTENANCE FACILITY, IT IS TRANSFERRED INTO THE TRANSPORTER. AT THIS TIME, AN EARTHEN BARRIER IS ERECTED OVER THE DTN ACCESS TO THE CLUSTER TO CONFINE THE TRANSPORTER AND TO PERMIT SATELLITE VERIFICATION THAT ONLY A SINGLE MISSILE IS PRESENT IN THE CLUSTER. ANY TAMPERING OF THIS EARTHEN BARRIER IS DETECTABLE BY SATELLITE. A TWO-DAY VERIFICATION PERIOD THEN FOLLOWS DURING WHICH ALL SHELTER PLUGS, AND BUILDING PARTS AND VEHICLE ROOF PARTS ARE OPEN FOR OBSERVATION.

HORIZONTAL SHELTER (CONT'D)

FOLLOWING THE OBSERVATION PERIOD, ALL OBSERVATION PORTS ARE CLOSED, AND THE TRANSPORTER VISITS EACH OF THE 23 SHELTERS IN THE CLUSTER, EMPLACING THE LAUNCHER IN ONE. THE REMAINING 22 SHELTERS WILL CONTAIN A SIMULATOR HAVING MANY OF THE CHARACTERISTICS OF A MISSILE. SINCE THE TRANSPORTER ACTIONS ARE THE SAME AT EACH SHELTER, THE LOCATION OF THE MISSILE IS NOT KNOWN BY ANY EXTERNAL OBSERVER.

THE SHELTER LAYOUT PATTERN HAS BEEN SELECTED TO PROVIDE THE DESIRED MISSILE SURVIVABILITY AND ALSO ALLOW ROOM FOR A FIFTY PERCENT INCREASE IN THE NUMBER OF SHELTERS WITHOUT EXPANDING THE AREA REQUIREMENTS FOR THE SYSTEM. AN AVERAGE DISTANCE OF 5,200 FT. BETWEEN SHELTERS HAS BEEN SELECTED. CONSTRUCTION OF MORE THAN 4,600 SHELTERS IS NOT PROPOSED; HOWEVER, THE COMBINATION OF SHELTER SPACING AND BACKFILL CAPABILITY REPRESENTS A SATISFACTORY COMPROMISE BETWEEN MINIMIZING LAND REQUIREMENTS AND PROVIDING A REASONABLE HEDGE AGAINST POTENTIAL SOVIET INITIATIVES.

MOBILITY OF THE M-X IS ACHIEVED THROUGH THE USE OF A TRANSPORTER AND AN ERECTOR LAUNCHER MECHANISM. THE LAUNCHER CONTAINS ELECTRONIC AND MECHANICAL EQUIPMENT REQUIRED TO MONITOR, OPERATE, AND LAUNCH THE MISSILE. THE SHELTER IS NOT REQUIRED TO LAUNCH THE MISSILE, AND IS THERFFORE NOT COUNTED UNDER SALT.

HORIZONTAL SHELTER (CONT'D--PAGE 3)

21

THE LAUNCHER WITH ITS CANISTERIZED MISSILE IS MOVED AMONG THE 23 SHELTERS IN A CLUSTER AT APPROXIMATELY 5 MILES PER HOUR BY A MULTI-AXLE TRANSPORT VEHICLE. THIS TRANSPORTER ALONE (ONE FOR EACH MISSILE DEPLOYED) WEIGHS ABOUT 750,000 LBS EMPTY AND ABOUT 1,250,000 LBS WHEN CARRYING THE MOBILE LAUNCHER OR A MASS SIMULATOR. THE TRANSPORTER AND LAUNCHER ARE SEPARABLE. ONLY THE LAUNCHER OR SIMULATOR IS INSERTED IN THE SHELTER.

WHEN THE LAUNCHER IS MOVED AMONG SHELTERS, THE TRANSPORTER VISITS EACH OF THE SHELTERS IN THE 23-SHELTER CLUSTER, WHERE A SIMILAR SERIES OF ACTIONS TAKES PLACE. AT ONE OF THE SHELTERS, THE MISSILE AND LAUNCHER ARE EXCHANGED FOR THE MISSILE SIMULATOR. SINCE THE MISSILE AND LAUNCHER ARE CONCEALED INSIDE THE TRANSPORTER, DURING THE EXCHANGE AN OBSERVER CANNOT DETERMINE WHICH SHELTER CONTAINS THE MISSILE AND WHICH CONTAINS SIMULATORS.

A BACK-UP CAPABILITY IS AVAILABLE IF IT IS SUSPECTED THAT CONCEALMENT HAS SOMEHOW BEEN COMPROMISED. ALL 200 MISSILES COULD BE RELOCATED WITHIN THEIR CLUSTERS IN ABOUT 12 HOURS. IF CONCEALMENT REMAINED IN QUESTION FOR SOME TIME, OR IN PERIODS OF TENSION, ALL OR A PORTION OF THE MISSILES COULD BE PUT IN MOTION ON THE CLUSTER ROADS, ABLE TO MOVE RAPIDLY TO THE NEAREST SHELTERS ON WARNING.

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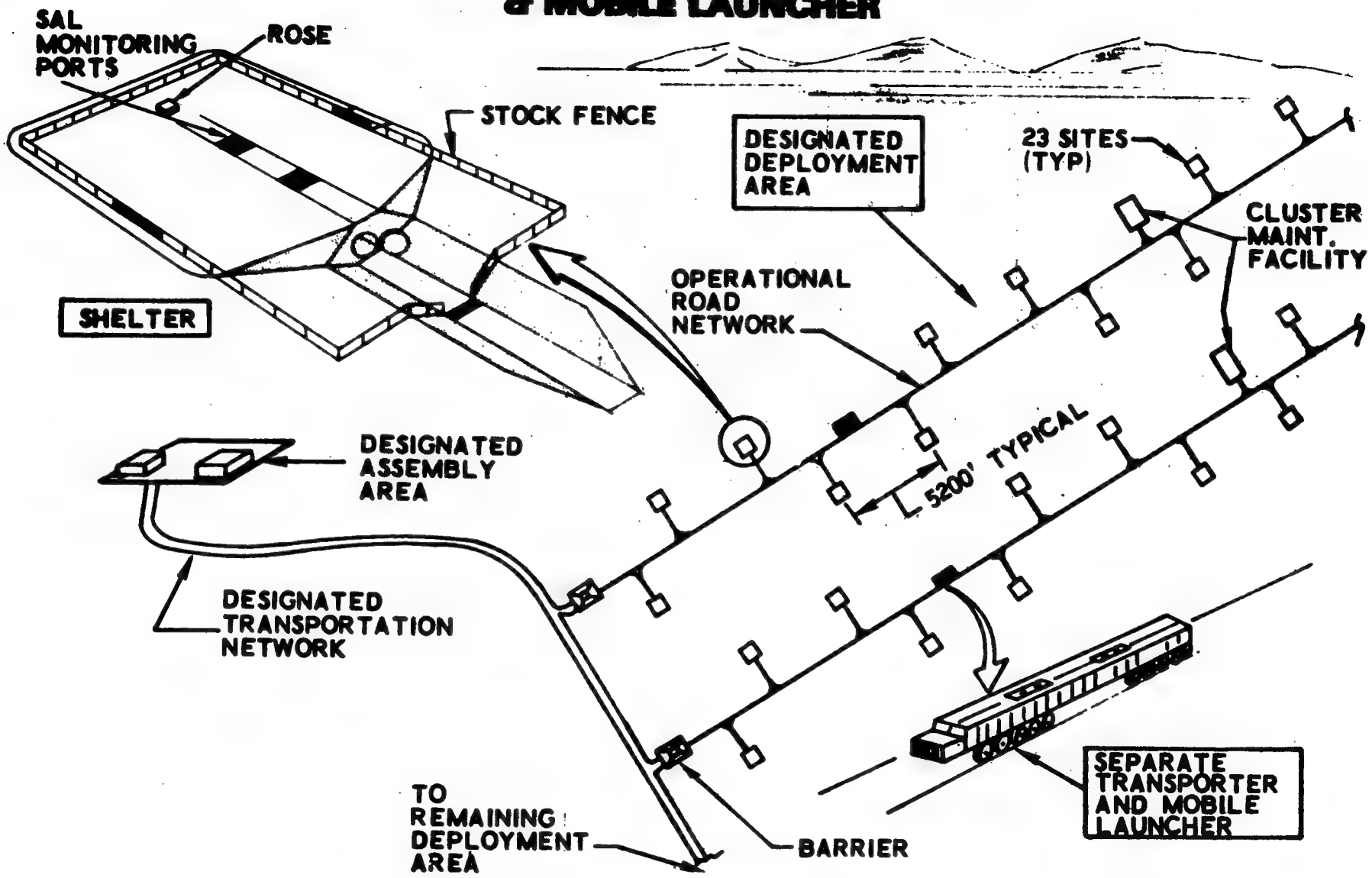
HORIZONTAL SHELTER-SEPARATE TRANSPORTER & MOBILE LAUNCHER



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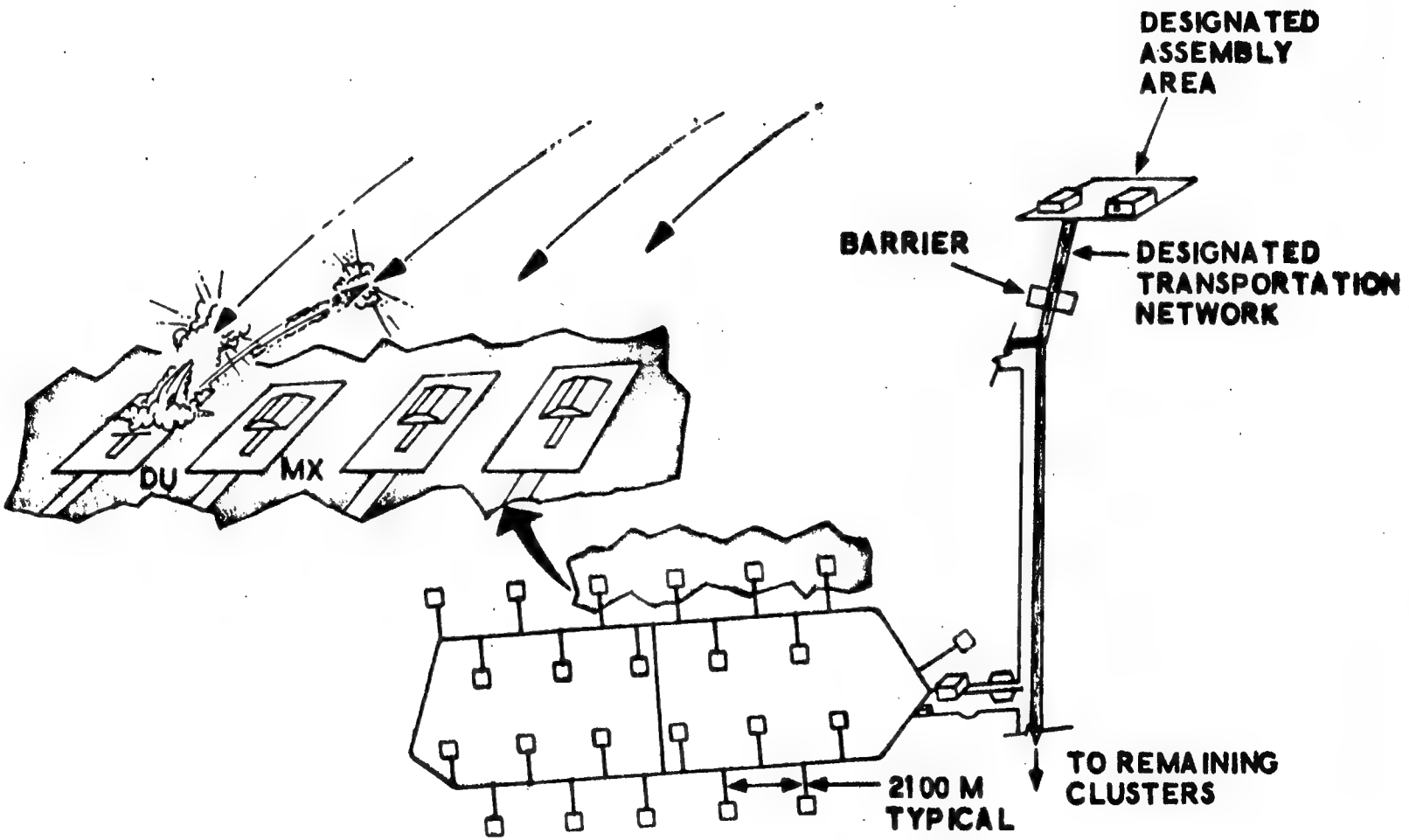
M-X DEFENSE

IN CASE THE SOVIETS DECIDE TO ABANDON ALL ARMS CONTROL MEASURES AND UNDERTAKE A MASSIVE "ARMS RACE" BUILDUP TO ATTACK M-X, THE US IS MAINTAINING, WITHIN THE CONSTRAINTS OF THE ANTI-BALLISTIC MISSILE TREATY, THE OPTION TO DEPLOY A BALLISTIC MISSILE DEFENSE (BMD) WHICH WOULD BLUNT A SOVIET ATTACK.

A BMD DEFENSE UNIT (DU), CONSISTING OF A RADAR AND SEVERAL INTERCEPTORS WOULD BE CONCEALED IN A SHELTER NEAR THE M-X MISSILE AND BE ACTIVATED IN CASE OF ATTACK. ITS PURPOSE WOULD BE TO DEFEND ONLY FILLED SHELTERS. SINCE THE SOVIETS WOULD NOT KNOW WHICH SHELTERS WOULD BE FILLED, THEY WOULD HAVE TO INCREASE THE NUMBER OF REENTRY VEHICLES (RVS) TARGETTED AT ALL SHELTERS--DOUBLE THE NUMBER IF M-X IS DEFENDED AGAINST ONLY ONE RV OR EVEN TRIPLE IF M-X IS DEFENDED AGAINST TWO SOVIET RVS.

THE TREMENDOUS LEVERAGE PROVIDED BY ONLY HAVING TO DEFEND FILLED SHELTERS SHOULD MAKE THE SOVIET COST TO ATTACK EXORBITANT. THEREFORE, MERELY HAVING THE OPTION TO DEPLOY SUCH A BMD SYSTEM SHOULD SERVE TO INHIBIT A SOVIET "ARMS RACE" BUILDUP TO ATTACK THE BASIC M-X SYSTEM.

MX Defense


DESIGNATED
ASSEMBLY
AREA
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DESIGNATED
TRANSPORTATION
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DU
MX
TO REMAINING
CLUSTERS
2100 M
TYPICAL

PHYSICAL SECURITY

APPROXIMATELY 200 UNMANNED REMOTE SURVEILLANCE SITES WILL BE BUILT, EACH IN A QUARTER ACRE FENCED PLOT IN THE DEPLOYMENT AREA. THE EXACT NUMBER WILL DEPEND ON THE FINAL SHELTER LAYOUT AND TOTAL AREA TO BE MONITORED.

EACH SITE WILL CONTAIN SURVEILLANCE SENSORS MOUNTED ON 100 FOOT TALL TOWERS. DATA COLLECTION FROM THE SENSORS WILL BE TRANSMITTED TO AN AREA SUPPORT CENTER VIA BURIED CABLE. THESE SENSORS ARE PART OF THE SECURITY SYSTEM AND WILL BE USED TO DETECT SUSPICIOUS ACTIVITIES WITHIN THE CLUSTER AREAS.

SECURITY OPERATIONS ARE CONTROLLED FROM AREA SUPPORT CENTERS. ROVING PATROLS WILL BE OPERATING IN THE DEPLOYMENT AREA AT ALL TIMES. ALARM SYSTEMS LOCATED AT EACH SHELTER, CLUSTER MAINTENANCE FACILITY, AND REMOTE SURVEILLANCE SITE WILL ACTIVATE IF PENETRATIONS ARE ATTEMPTED. IF AN ALARM ACTIVATES, A ROVING SECURITY PATROL TEAM WILL BE DIRECTED TO THE LOCATION TO ASSESS THE SITUATION. IF WARRANTED, BACKUP SECURITY FORCES ARE AVAILABLE AT THE AREA SUPPORT CENTER FOR TRANSPORT BY HELICOPTER TO THE AFFECTED LOCATIONS. ADDITIONALLY, THE REMOTE SURVEILLANCE RADARS WILL ALSO BE USED TO MONITOR THE AREA FOR SUSPICIOUS ACTIVITIES WHICH MAY WARRANT ON-LOCATION SECURITY CHECKS. FINALLY, ANY TIME A MISSILE IS TRANSPORTED OVER THE ROAD NETWORK, SECURITY ESCORTS WILL BE PROVIDED FOR SAFETY AND TRAFFIC CONTROL.

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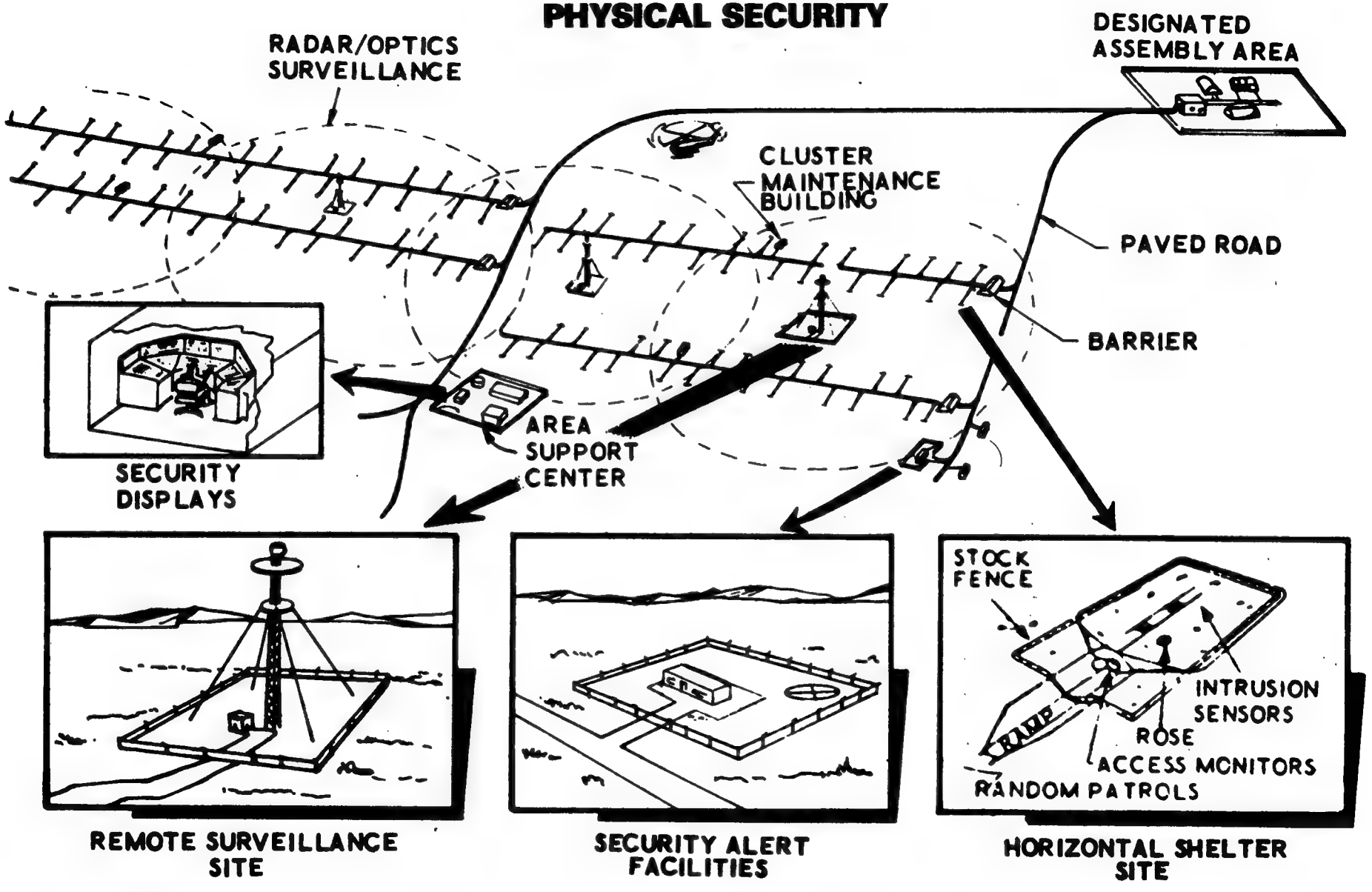
PHYSICAL SECURITY



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M-X ENVIRONMENTAL PROCESS

PURSUANT TO THE NATIONAL ENVIRONMENTAL POLICY ACT AND DOD DIRECTIVE 6050.1, THE AIR FORCE IMPLEMENTED AN M-X ENVIRONMENTAL PROGRAM WHICH INCLUDED THE PREPARATIONS OF FOUR ENVIRONMENTAL IMPACT STATEMENTS (EIS). AN EIS WAS PREPARED FOR THE M-X BURIED TRENCH CONSTRUCTION AND TEST PROJECT. A SECOND EIS WAS PREPARED AS AN INPUT TO THE MILESTONE II DECISION ON WHETHER TO PROCEED WITH FULL SCALE ENGINEERING DEVELOPMENT (FSED). FSED ACTIVITIES INCLUDE PREPARATION AND PUBLICATION OF THE THIRD AND FOURTH EIS'S: ONE TO SUPPORT SELECTION OF A DEPLOYMENT AREA(S) AND ANOTHER TO SUPPORT THE MILESTONE III DECISION FOR PRODUCTION AND DEPLOYMENT.

THE M-X MILESTONE II EIS COMPARED THE ENVIRONMENTAL EFFECTS OF CANDIDATE BASING MODES BY INVESTIGATING THE IMPACT OF DEPLOYMENT IN SEVEN BASING MODEL COMPARISON AREAS (BMCAs) OF THE UNITED STATES. THE BMCAs REPRESENTED THOSE REGIONS IN THE US IN WHICH SUITABLE AREAS FOR BASING M-X HAD BEEN FOUND. THEY WERE CHOSEN AFTER A CAREFUL SCREENING OF THE ENTIRE NATION USING PRIMARILY GEOLOGICAL AND PHYSICAL CRITERIA.

FIRST, COARSE SCREENING CRITERIA WERE APPLIED TO THE ENTIRE CONTINENTAL UNITED STATES. THIS PROCESS EXCLUDED POPULATION CENTERS, MILITARY BASES, PARKS, INDIAN RESERVATIONS, AND OTHER RESTRICTED USE AREAS FROM CONSIDERATION. INTERMEDIATE AND FINE SCREENING CRITERIA WERE THEN APPLIED TO REMAINING AREAS, EXCLUDING SUCH THINGS AS PARCELS OF AGGREGATE LAND LESS THAN 500 SQUARE MILES AND AREAS WITH GRADES GREATER THAN 10 PERCENT.

STUDIES LEADING TO THE MILESTONE II EIS DETERMINED WHETHER ENVIRONMENTAL CONSIDERATIONS WOULD SHOW A PREFERENCE FOR ANY OF FOUR CANDIDATE M-X BASING MODES (VERTICAL SHELTER, HORIZONTAL SHELTER, HYBRID TRENCH, AND SLOPE-SIDED POOL). BASED UPON THIS EVALUATION, THE AIR FORCE CONCLUDED THAT NO ONE BASING MODE WAS ON BALANCE ENVIRONMENTALLY PREFERABLE TO ANOTHER. ALTHOUGH EACH BASING MODE HAD ADVANTAGES AND DISADVANTAGES WHICH VARIED DEPENDING ON WHICH OF THE DIFFERENT AREAS WAS CONSIDERED, THESE WERE NOT

SIGNIFICANT ENOUGH TO FAVOR ONE BASING MODE OVER ANOTHER. NO ATTEMPT WAS MADE AT THAT TIME TO RANK, SELECT, OR INDICATE A PREFERENCE AMONG BASING AREAS.

HOWEVER, TWO SIGNIFICANT ENVIRONMENTAL FACTORS COMMON TO ALL FOUR BASING MODES BECAME EVIDENT. FIRST, A SECURITY APPROACH WHICH WOULD RESTRICT ACCESS TO THE AGGREGATE BASING AREA, TERMED AREA SECURITY, WOULD REQUIRE THAT EXTENSIVE AREAS OF LAND BE RESERVED FOR EXCLUSIVE AIR FORCE USE, A RESTRICTION WHICH PROVED TO BE UNACCEPTABLE. SECOND, AS SPACING BETWEEN SHELTERS INCREASED, GENERAL DEPLOYMENT AREA REQUIREMENTS INCREASED. ALTHOUGH ACTUAL LAND NEEDED FOR EXCLUSIVE M-X USE REMAINED CONSTANT, THE TOTAL ROAD REQUIREMENTS INCREASED--WITH ASSOCIATED ACQUISITION AND OPERATING COSTS, EASEMENT REQUIREMENTS AND OTHER ASSOCIATED IMPACTS SIMILARLY INCREASED.

THE PRESIDENT DECIDED AGAINST THE AREA SECURITY SYSTEM AND DIRECTED THE AIR FORCE TO ADOPT A POINT SECURITY SYSTEM WHERE ONLY TWO AND ONE HALF ACRES AROUND EACH SHELTER ARE EXCLUDED FROM OTHER USE. IN ADDITION, EXTENSIVE ANALYSIS OF PROJECTED SOVIET ICBM CAPABILITIES, NUCLEAR EFFECTS, AND SHELTER HARDNESS WAS UNDERTAKEN--RESULTING IN MINIMUM SPACING REQUIREMENTS. THE CURRENT M-X BASELINE REFLECTS THESE CHANGES IN THE SECURITY SYSTEM AND SPACING. IT THUS REPRESENTS A BALANCE BETWEEN A VARIETY OF CONCERNS.

SINCE THE MILESTONE II EIS, THE AIR FORCE HAS CONTINUED TO STUDY AND DEFINE THE M-X/MPS SYSTEM, PERMITTING AN EVALUATION OF THE INTERACTION BETWEEN POTENTIAL BASING AREAS AND MILITARY CONSIDERATIONS. AS A FIRST STEP, THE SUITABLE AREAS PREVIOUSLY DEFINED BY ENVIRONMENTAL CHARACTERISTICS WERE REDEFINED INTO SIX AREAS TO REFLECT MILITARILY, LOGICAL DEPLOYMENT AREAS.

M-X ENVIRONMENTAL PROCESS

- FOUR ENVIRONMENTAL IMPACT STATEMENTS (EIS)
  - TRENCH CONSTRUCTION AND TEST
  - MILESTONE II (FULL SCALE ENGINEERING DEVELOPMENT)
  - DEPLOYMENT AREA SELECTION
  - MILESTONE III (PRODUCTION AND DEPLOYMENT)

- PAST RESULTS
  - TOTAL US SCREENED USING COARSE, INTERMEDIATE, AND FINE CRITERIA
  - DIFFERENT BASING MODES EVALUATED
  - AREA SECURITY DROPPED
  - SPACING BETWEEN SHELTERS MINIMIZED

- CURRENT ACTION
  - MILITARY SCREENING CRITERIA TO SUPPLEMENT OTHER WORK
  - EVALUATE SIX POTENTIAL BASING AREAS

CANDIDATE BASING AREAS

STARTING IN THE NEVADA-UTAH AREA AND FOLLOWING A "HORSESHOE" PATTERN, THE SIX POTENTIAL BASING AREAS WERE:

NEVADA-UTAH

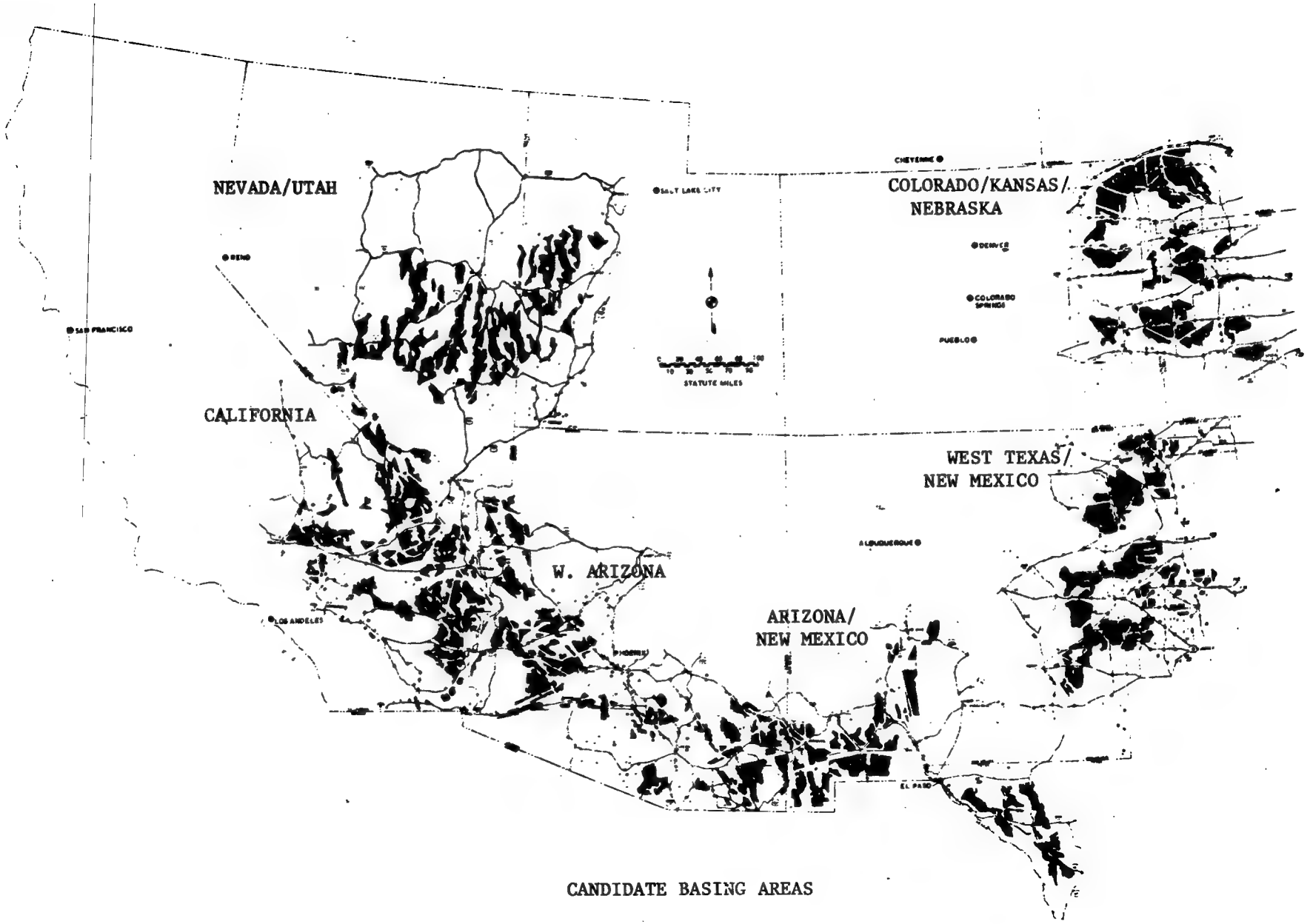
CALIFORNIA

WESTERN ARIZONA

ARIZONA-NEW MEXICO-SOUTHWEST TEXAS

WESTERN TEXAS-NEW MEXICO

COLORADO-KANSAS-NEBRASKA



CANDIDATE BASING AREAS

CRITERIA

32

IN A SENSE, PLANNING FOR M-X IS EQUIVALENT TO HAVING PLANNED A STRATEGIC SYSTEM SOON AFTER WORLD WAR II THAT WOULD BE VIABLE TODAY IN SPITE OF TECHNOLOGICAL ADVANCES AND CHANGES IN THE WORLD SITUATION. SUCH PLANNING WOULD HAVE HAD TO BE DONE IN THE LATE 1940S OR EARLY 1950S--JUST PRIOR TO THE FIRST HYDROGEN BOMB AND THE KOREAN WAR; 5 TO 10 YEARS BEFORE THE FIRST ICBM, THE FIRST SATELLITE, AND THE CUBAN REVOLUTION; 10 TO 15 YEARS BEFORE THE FIRST MAN ON THE MOON AND THE VIETNAM WAR; A TIME WHEN THE WORLD'S BEST COMPUTER COULD NOT COMPETE WITH TODAY'S HAND HELD CALCULATORS WITH THEIR TRANSISTORS AND MICROELECTRONICS; A TIME WHEN THE US POLICY OF CONTAINMENT WAS BACKED BY UNQUESTIONED NUCLEAR SUPERIORITY.

AS YET UNIMAGINED CHANGES WILL INEVITABLY TAKE PLACE DURING THE LIFETIME OF M-X. WHILE US RESPONSES TO NEAR TERM SOVIET CHALLENGES CANNOT BE DELAYED, M-X PLANNING REQUIRES GREAT CAUTION AND CAREFUL HEDGING TO ACCOMMODATE FUTURE CHANGE WITH MINIMUM IMPACT ON NATIONAL SECURITY. HENCE, CRITERIA WERE DEVELOPED AND USED TO EVALUATE SIX POTENTIAL BASING AREAS, WITH THE INTENT OF PROVIDING MINIMUM SAFETY FACTORS RELATIVE TO BOTH EXPECTED AND UNFORESEEN PROBLEMS.

CRITERIA

BENEFITS OF DISTANCE

IN DEVELOPING MILITARY SCREENING CRITERIA FOR M-X BASING AREAS, THE ADVANTAGES OF SEPARATING M-X FROM AREAS WHERE POTENTIAL THREATS COULD BE BASED BECAME EVIDENT. WHILE DISTANCE REQUIREMENTS CANNOT BE EXACTLY SPECIFIED SINCE FUTURE THREAT DEVELOPMENTS CANNOT BE DEFINED PRECISELY, SEPARATION OF M-X FROM AREAS WHERE EITHER PHYSICAL AND ELECTROMAGNETIC THREATS MIGHT BE DEPLOYED--OVERTLY OR COVERTLY--IS ADVISABLE FOR THE REASONS LISTED.

NO SEPARATION DISTANCE COULD TOTALLY NEGATE CONCERNS OVER FUTURE THREAT DEVELOPMENTS, BUT ADDED DISTANCE WILL RAISE THE COST TO ATTACK AND FACILITATE COUNTERMEASURES, THEREBY REDUCING THE SOVIETS' EXPECTED PAYOFF AND DETERRING DEVELOPMENT OF SUCH THREATS.

BENEFITS OF DISTANCE

- PHYSICAL THREATS (E.G. CRUISE MISSILES, RADAR HOMING MISSILES, SABOTAGE)
  - MORE TIME TO REACH TARGET
  - INCREASED WARNING PROBABILITY AND TIME
  - MORE TIME FOR DEFENSIVE REACTION OR M-X LAUNCH
  - MORE ATTACK RESOURCES REQUIRED
- ELECTROMAGNETIC THREATS (E.G. JAMMERS, DATA COLLECTION, WEAPONS CONTROL)
  - INCREASED POWER REQUIRED
  - LINE OF SIGHT LIMITS (200-300 MILES FROM 40,000 - 60,000 FEET)
  - COUNTERMEASURES FACILITATED

RAISES COST TO ATTACK AND REDUCES EXPECTED PAYOFF.
- DETERS THREAT DEVELOPMENT -

SUBMARINE LAUNCHED BALLISTIC MISSILES (SLBMS)

DURING NORMAL DAY-TO-DAY OPERATIONS WHERE THE M-X MISSILES ARE CONCEALED, SLBMS WILL NOT POSE A SIGNIFICANT THREAT BECAUSE OF THEIR LOW YIELDS AND POOR ACCURACY. HOWEVER, M-X MISSILES COULD BE VULNERABLE TO SLBMS WHEN THEY ARE ON A TRANSPORTER OUTSIDE A SHELTER DURING OPERATIONS IN A BACKUP MOBILITY MODE.

PROVISIONS WILL, THEREFORE, BE INCLUDED IN THE SYSTEM SO THE MISSILE WILL BE ABLE TO BE INSERTED IN A SHELTER, AND THE SHELTER CLOSED, WITHIN SLBM FLIGHT TIME. UNDER NORMAL CONDITIONS (CURRENT SOVIET PATROL AREAS AND MINIMUM ENERGY TRAJECTORIES), SUFFICIENT TIME WILL BE AVAILABLE FOR THIS OPERATION REGARDLESS OF WHICH M-X BASING AREA IS SELECTED. HOWEVER, THE SOVIETS CAN REDUCE THEIR SLBM FLIGHT TIMES BY USING DEPRESSED TRAJECTORIES, MOVING CLOSER TO THE US COAST, OR A COMBINATION OF BOTH. THE EFFECTS OF SUCH CHANGES ARE ILLUSTRATED ON THE NEXT CHART.

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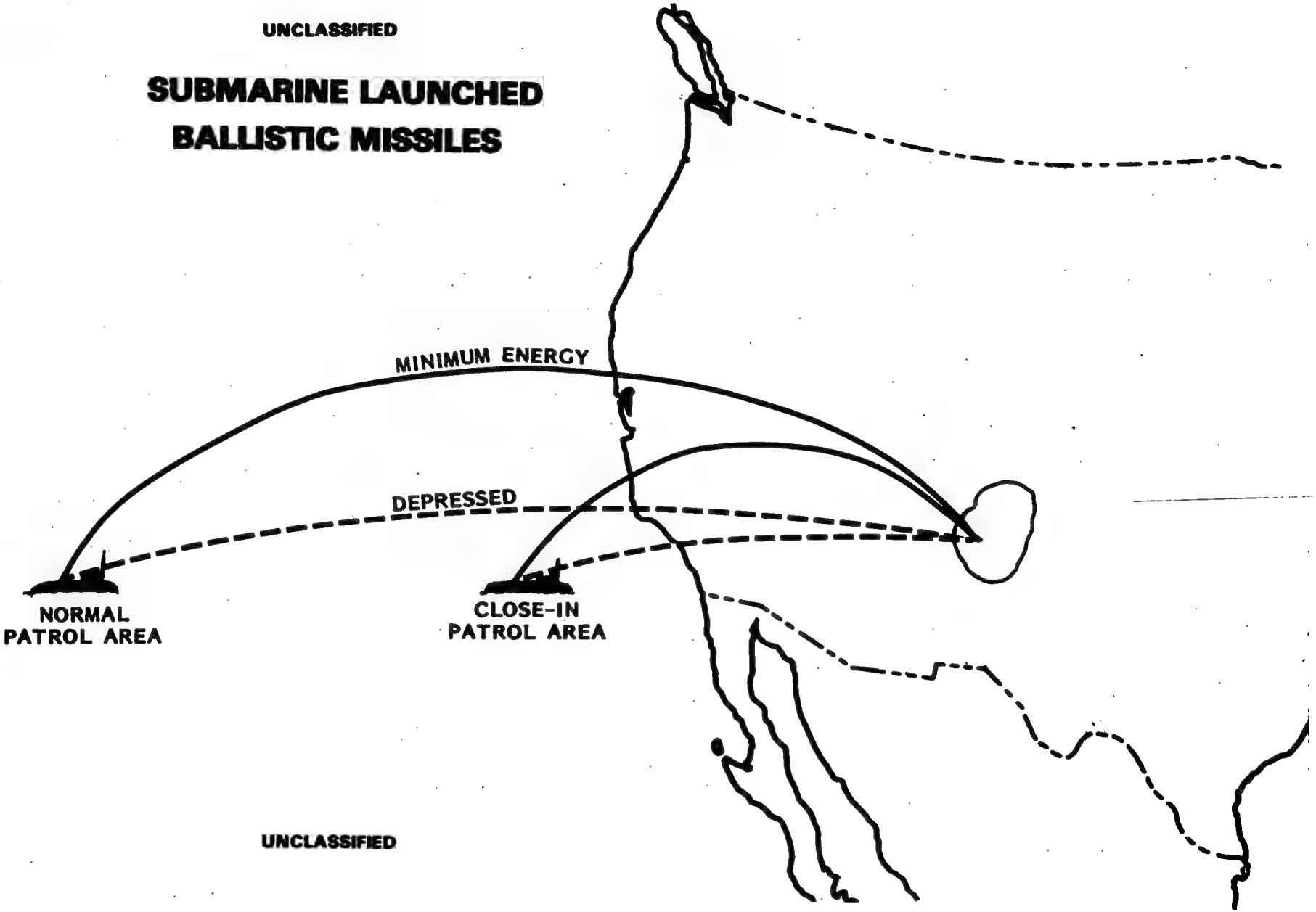
SUBMARINE LAUNCHED BALLISTIC MISSILES



UNCLASSIFIED

M-X MOBILITY OPTIONS VS SLBM THREATS

THE CHART DOES NOT SHOW ACTUAL TIMES AND DISTANCES BECAUSE THEY ARE CLASSIFIED. TRAJECTORIES ARE INDICATED BY BANDS DUE TO THE VARIETY OF SOVIET SLBMS DEPLOYED. THE RELATIVE TIMES INDICATED ON THE RIGHT ARE REPRESENTATIVE OF THE CURRENT M-X DESIGN.

- "M-X AT SHELTER FENCE" REPRESENTS THE TIME FOR WARNING, INSERTING AN M-X MISSILE, AND CLOSING THE SHELTER, ASSUMING THE MISSILE WAS WAITING AT THE SHELTER FENCE. WITH INCREASING TIME, THE MISSILE COULD BE IN MOTION AT GREATER DISTANCES FROM THE SHELTER AND STILL BE ABLE TO GAIN SAFETY.

- "M-X BETWEEN TWO SHELTERS" REPRESENTS THE TIME UNTIL CLOSURE WHEN THE MISSILE IS AT THE WORST POINT BETWEEN TWO SHELTERS. THE SPREAD INDICATED BY THE BRACKET IS DUE TO UNEQUAL DISTANCES BETWEEN DIFFERENT SETS OF ADJACENT SHELTERS.

- "M-X AT CLUSTER MAINTENANCE FACILITY" OR CMF REPRESENTS TIME TO CLOSURE WHERE THE TRANSPORTER IS AT THE CMF (WHERE THE CREW COULD REST).

M-X MOBILITY OPTIONS (CONT'D)

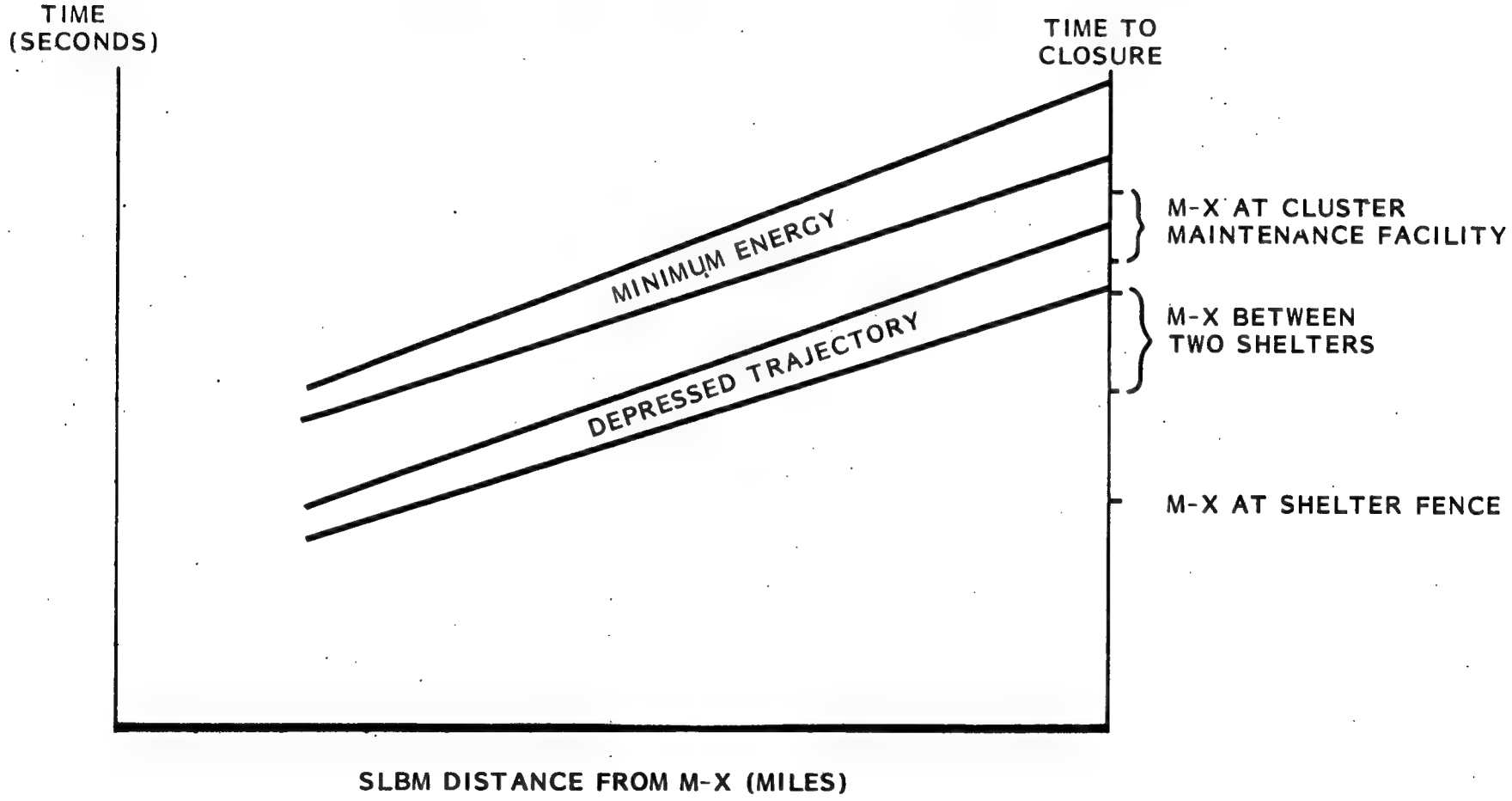
ADDITONAL TIME PROVIDES THREE BENEFITS:

- IT PROVIDES INSURANCE AGAINST ANY MOBILITY PROBLEMS THAT ARISE DURING DEVELOPMENT AND ALLOWS LOWER COST SOLUTIONS TO PROVIDING MOBILITY.
- IT INCREASES OPERATIONAL MOBILITY OPTIONS.
- IT MAY ALLOW THE TRANSPORTER TO REACH A GREATER NUMBER OF SHELTERS IN SLBM FLIGHT TIME, THEREBY ENHANCING LOCATION UNCERTAINTY.

IF M-X WERE DEPLOYED LESS THAN 200 MILES FROM THE COAST THE SOVIETS COULD SERIOUSLY THREATEN THE SYSTEM IN ITS BACKUP MOBILITY MODE BY MOVING CLOSE TO US WATERS AND USING DEPRESSED TRAJECTORIES--NECESSITATING A DESIGN CHANGE, IF POSSIBLE, AND HIGHER COSTS.

BY DEPLOYING A MINIMUM OF 200 MILES INLAND, OPERATIONAL OPTIONS WILL BE AVAILABLE TO PERMIT A VIABLE BACKUP MOBILITY MODE FOR M-X.

M-X MOBILITY OPTIONS Vs SLBM THREATS



BOOST PHASE INTERCEPT

A POTENTIAL ENEMY BOOST PHASE INTERCEPTOR IS WORRISOME BECAUSE IT COULD THREATEN M-X IN ITS PRIMARY CONCEALMENT MODE AS WELL AS IN ITS BACKUP SURVIVABILITY MODES. IN ADDITION, IT WOULD BE CONCENTRATED AGAINST US RESOURCES THAT SURVIVED A SOVIET FIRST STRIKE, SO A RELATIVELY FEW SOVIET BOOST PHASE INTERCEPTORS COULD HAVE A LARGE PAYOFF TO THE SOVIETS.

THE CHART DEPICTS AN ICBM LAUNCH AND AN ELLIPSE ON THE GROUND FROM WHICH IT COULD BE THREATENED BY A BOOST PHASE INTERCEPTOR.

- THE EASIEST PLACE FROM WHICH TO PERFORM AN INTERCEPT WOULD BE IN LINE WITH THE ICBM'S TRAJECTORY. THE WORST PLACE WOULD BE BEHIND THE MISSILE, SO THE INTERCEPTOR WOULD HAVE TO CHASE IT.

- THE ELLIPSE IS DEFINED BY ITS TWO AXIS AS INDICATED ON THE CHART. THE KEY PARAMETERS WHICH DETERMINE THE SIZE OF THE ELLIPSE ARE ICBM PERFORMANCE, INTERCEPTOR BURNOUT VELOCITY, INTERCEPTOR REACTION TIME AFTER ICBM LAUNCH, AND THE RELATIVE POSITIONS OF THE ICBM AND THE INTERCEPTOR. (NUMBERS ARE LEFT OFF CHART DUE TO CLASSIFICATION.)

BOOST PHASE INTERCEPT (CONT'D)

WHILE EXACT PROJECTIONS OF BOOST PHASE INTERCEPTORS ARE NECESSARILY HYPOTHETICAL, IT DOES NOT APPEAR THAT A CHASE FROM MORE THAN 200 MILES WOULD BE POSSIBLE WITHOUT MAJOR, UNFORESEEN TECHNOLOGICAL IMPROVEMENTS. IN THE CASE OF M-X, WHICH WILL GENERALLY BE LAUNCHED NORTHWARD, BOOST PHASE INTERCEPTORS MORE THAN 200 MILES SOUTH OF THE DEPLOYMENT AREA SHOULD NOT POSE A SIGNIFICANT THREAT.

INTERCEPTORS DEPLOYED AT SEA TO THE NORTHWEST OF THE M-X DEPLOYMENT AREA COULD HAVE A GREATER EFFECTIVE RANGE. HOWEVER, DEPLOYMENT AT LEAST 200-300 MILES INLAND, COMBINED WITH PROTECTION AFFORDED BY US INTERNATIONAL WATERS, SHOULD PROVIDE REASONABLE PROTECTION FROM SEA-BASED INTERCEPTORS.

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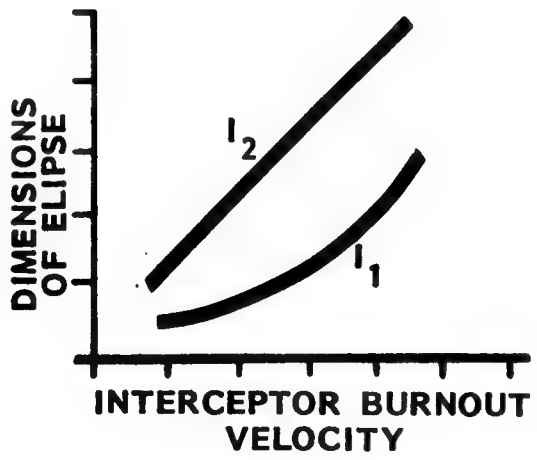
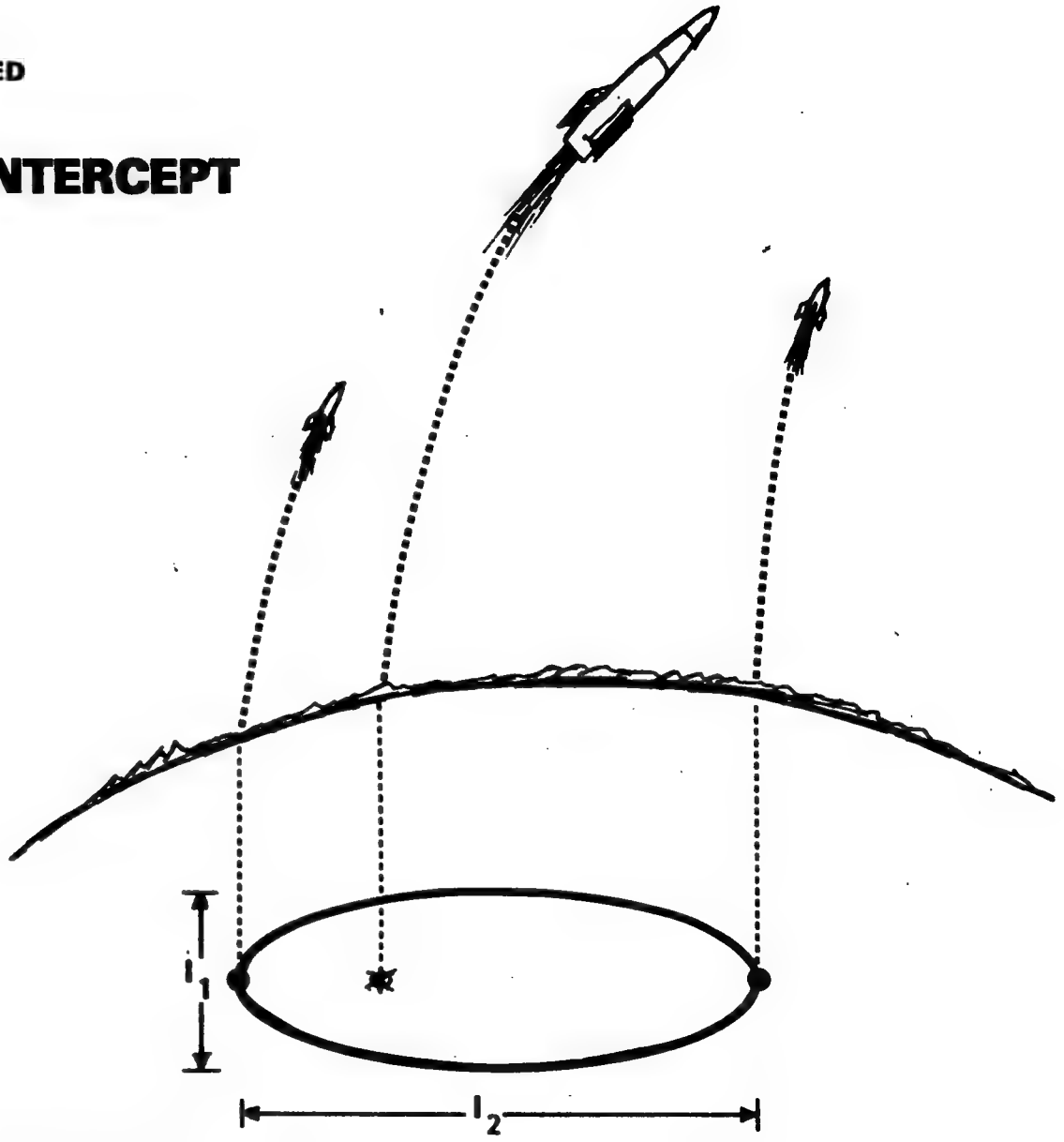
BOOST PHASE INTERCEPT





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SCREENING CRITERIA

THREE COMPOSITE CRITERIA WERE DEVELOPED: DISTANCE FROM THE COAST; DISTANCE FROM INTERNATIONAL BORDERS; AND COMPATIBILITY WITH LOCAL AREA AND ACTIVITIES.

DISTANCE FROM THE COAST. AS INDICATED EARLIER, THE GENERAL RATIONALE FOR MOVING INLAND IS THAT DISTANCE GENERALLY REDUCES THE EFFECTIVENESS OF THREATENING SEA-BASED FORCES. FOR PHYSICAL THREATS SUCH AS AIRCRAFT OR MISSILES, ADDED DISTANCE DIRECTLY INCREASES THE TIME NEEDED TO REACH THE TARGET, INCREASES PROBABLE WARNING TIME, AND ALLOWS MORE TIME FOR DEFENSIVE REACTIONS. FOR ELECTROMAGNETIC THREATS, POWER REQUIREMENTS INCREASE IN RELATION TO DISTANCE AND ARE OFTEN LIMITED TO "LINE-OF-SIGHT" DISTANCES. THREATS CONSIDERED IN THE DEVELOPMENT OF THIS CRITERION INCLUDED JAMMING, SEA LAUNCHED BALLISTIC MISSILES (SLBMs), CRUISE MISSILES, RADAR HOMING MISSILES, MISSILES WITH ADVANCED SENSORS TO ATTACK MISSILE TRANSPORTERS, AND INTERCEPTORS TO ATTACK M-X DURING ITS BOOST PHASE ASCENT.

IN MAKING A JUDGMENT ON REASONABLE DISTANCE REQUIREMENTS, THESE REPRESENTATIVE POTENTIAL THREATS WERE CONSIDERED IN CONJUNCTION WITH THE POTENTIAL PROTECTION PROVIDED BY US TERRITORIAL WATERS AND THE ABILITY TO DEPLOY US FORCES IN AND OVER INTERNATIONAL WATERS. FIRM BREAKPOINTS WERE NOT EVIDENT, BUT GENERAL RANGES OF ACCEPTABILITY COULD BE DEFINED.

BASING M-X 500 OR MORE MILES FROM THE COAST WOULD PRECLUDE UNNECESSARY INTRODUCTION OF SIGNIFICANT RISKS AND GREATLY FACILITATE RESPONSES TO UNFORESEEN THREATS. AS DISTANCE IS DECREASED BELOW 500 MILES, RISKS AND RESPONSE DIFFICULTIES INCREASE ACCORDINGLY, WITH CONCERNS BECOMING INCREASINGLY SERIOUS BETWEEN 300 AND 200 MILES FROM THE COAST. DEPLOYMENT LESS THAN 200 MILES FROM THE COAST WILL ENTAIL UNREASONABLE RISKS AND WOULD BE WORTHY OF FURTHER CONSIDERATION ONLY IF DEPLOYMENT FURTHER INLAND PROVED IMPOSSIBLE.

DISTANCE FROM INTERNATIONAL BORDERS. THE LOGIC FOR DEPLOYING M-X AWAY FROM BORDERS IS SIMILAR TO THE LOGIC FOR THE "DISTANCE FROM THE COAST" CRITERION--ADDED DISTANCE REDUCES VULNERABILITIES TO UNFORESEEN THREATS. ADDITIONALLY, FREE ACCESS TO THE LAND SURROUNDING THE M-X DEPLOYMENT AREA IS DESIRED TO AVOID INTERNATIONAL COMPLICATIONS IN ANY INVESTIGATION OF SUSPICIOUS ACTIVITIES AND TO INHIBIT MEANINGFUL INTELLIGENCE COLLECTION. NATIONAL JURISDICTION OVER SUCH LAND WILL PROVIDE TIMELY CONTROL OF ACTIVITIES WHICH REPRESENT A DANGER TO US NATIONAL SECURITY INTERESTS, WITHOUT A COMMITMENT OF COOPERATIVE BEHAVIOR FROM FOREIGN GOVERNMENTS.

DISTANCE FROM NON-US TERRITORY REDUCES THE POSSIBILITY OF A HAVEN FOR COVERT ACTIVITIES AND PRECLUDES AN ENEMY ATTACK ON THE M-X SYSTEM WITHOUT PENETRATION OF US BORDERS AND FLIGHT OVER US TERRITORY. THEREFORE, INCREASING DISTANCE FROM BORDERS ENHANCES "CONUS PROTECTION" OF M-X--ENEMY ATTACKS WILL REQUIRE GREATER RESOURCES AND HAVE A LOWER CHANCE OF SUCCESS, US DETECTION PROBABILITY AND WARNING TIME WILL BE INCREASED, AND US RESPONSES WILL BE FACILITATED.

THREATS CONSIDERED INCLUDED ADVANCED SENSORS, PRECISION GUIDED MUNITIONS, BOOST PHASE INTERCEPTORS, JAMMERS, CRUISE MISSILES, AND RADAR HOMING MISSILES. WHILE NOT INCLUSIVE OF ALL POTENTIAL DEVELOPMENTS, SUCH THREATS WERE USED TO SUPPORT A JUDGMENT ON REASONABLE DISTANCE REQUIREMENTS AND TO DEFINE RANGES OF ACCEPTABILITY RELATIVE TO DISTANCE FROM INTERNATIONAL BORDERS.

THIS CRITERION WAS DEFINED IN THE SAME TERMS AS THE "DISTANCE FROM THE COAST" CRITERION--500 MILE SEPARATION FROM BORDERS IS DESIRABLE, PROBLEMS ASSOCIATED WITH BASING AREAS BETWEEN 500 AND 200 MILES FROM BORDERS CAN BE HANDLED WITH REASONABLE MEASURES, BUT BASING WITH LESS THAN 200 MILE SEPARATION WOULD ENTAIL UNREASONABLE RISKS.

DUE TO THE WIDE VARIETY OF CONSIDERATIONS ENCOMPASSED BY THE "COMPATIBILITY WITH LOCAL AREA AND ACTIVITIES" CRITERION, IT IS DIFFICULT TO DEFINE IT IN A STRAIGHTFORWARD MANNER. HOWEVER, COMPATIBILITY TENDS TO DEPEND ON THREE HIGHLY CORRELATED CHARACTERISTICS. RURAL AREAS WITH LOW POPULATIONS, LOW ACTIVITY LEVELS, AND PRIMARILY UNDEVELOPED LAND SHOULD BE HIGHLY COMPATIBLE WITH THE M-X SYSTEM AND INVOLVE NO SIGNIFICANT OPERATIONAL PROBLEMS. AREAS WITH MODEST RURAL POPULATIONS, LOW TO MEDIUM ACTIVITY LEVELS, AND PRIMARILY UNDEVELOPED OR RANGE LAND ARE CONSIDERED REASONABLE DEPLOYMENT AREAS FOR M-X--PROBLEMS WOULD INCREASE, BUT COULD BE SOLVED WITH REASONABLE MEASURES. AREAS WITH HIGH RURAL POPULATIONS, HIGH ACTIVITY LEVELS, OR WHICH ARE PREDOMINANTLY AGRICULTURAL ARE CONSIDERED UNREASONABLE BASING AREAS.

SCREENING CRITERIA

DISTANCE FROM THE COAST: 500 MILES WOULD PRECLUDE INTRODUCTION OF SIGNIFICANT RISKS. LESS THAN 200 MILES WOULD ENTAIL UNREASONABLE RISKS.

DISTANCE FROM INTERNATIONAL BORDERS: 500 MILES WOULD PRECLUDE INTRODUCTION OF SIGNIFICANT RISKS. LESS THAN 200 MILES WOULD ENTAIL UNREASONABLE RISKS.

COMPATIBILITY WITH LOCAL AREA AND ACTIVITIES: AREAS WITH HIGH RURAL POPULATIONS, HIGH ACTIVITY LEVELS, OR WHICH ARE PREDOMINANTLY AGRICULTURAL ARE CONSIDERED UNREASONABLE BASING AREAS.

COMPATIBILITY WITH LOCAL AREA AND ACTIVITIES. ACTIVITIES ARE UNDER WAY TO ANALYZE THE ENVIRONMENTAL AND SOCIO-ECONOMIC IMPACT OF PROPOSED ACTIONS AND DEVELOP WAYS TO MINIMIZE ADVERSE IMPACTS. THE REVERSE PROCESS IS ALSO REQUIRED--NAMELY, TO ASSESS HOW THE LOCAL AREA AND ACTIVITIES WILL AFFECT MILITARY EFFECTIVENESS AND OPERATIONAL PROCEDURES.

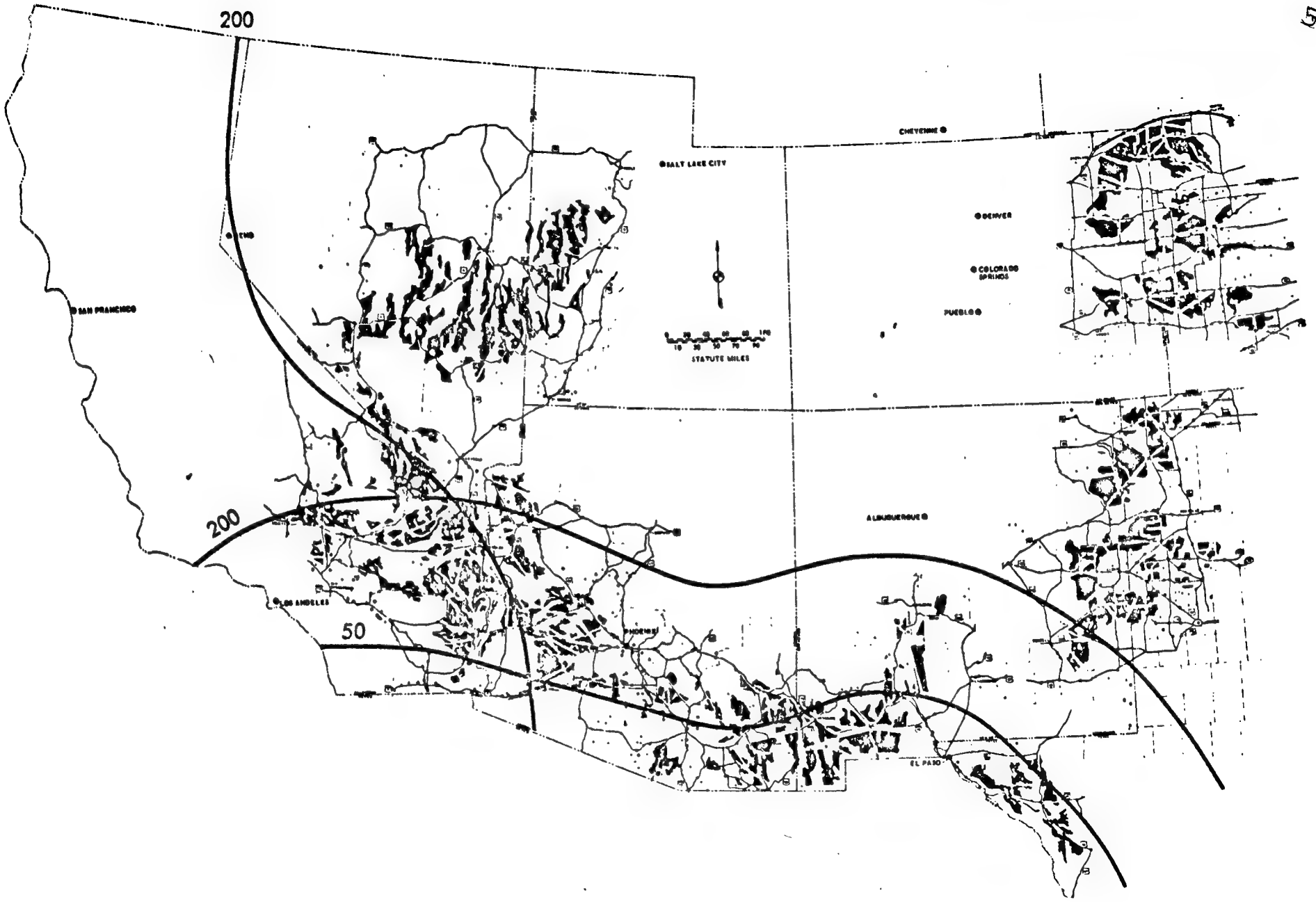
FROM THE ONSET OF THE M-X PROGRAM, "LAND USE" HAS BEEN A PRIMARY CONSIDERATION. INCLUDED IN THIS CONSIDERATION ARE DESIRES TO: MINIMIZE ACQUISITION OF LAND FOR EXCLUSIVE M-X USE, MAXIMIZE USE OF PUBLIC LAND RATHER THAN PRIVATE, AND AVOID UNNECESSARY USE OF PRODUCTIVE LAND. THIS CONSIDERATION IS CONSISTENT WITH DOD POLICY AND THE AIR FORCE'S INTERPRETATION OF CONGRESSIONAL INTENT.

PUBLIC LAW 96-29 DATED JUNE 27, 1979, DEPARTMENT OF DEFENSE SUPPLEMENTAL APPROPRIATION AUTHORIZATION ACT 1979, SECTION 202 B STATED ". . . IT IS THE SENSE OF THE CONGRESS THAT THE BASING MODE FOR THE MX MISSILE SHOULD BE RESTRICTED TO LOCATION ON THE LEAST PRODUCTIVE LAND AVAILABLE THAT IS SUITABLE FOR SUCH PURPOSE." THE DISCUSSION IN CONGRESS INDICATES THAT THE INTENT WAS TO MINIMIZE ACQUISITION OF AGRICULTURALLY PRODUCTIVE LAND FOR M-X DEPLOYMENT. THEREFORE, BASING AREAS ARE PREFERRED WHICH AVOID AGRICULTURAL ACTIVITIES.

THIS POLICY IS ALSO CONSISTENT WITH MINIMIZING OPERATIONAL COSTS AND ENHANCING VERIFICATION AND ACTIVITIES TO PRESERVE MISSILE LOCATION UNCERTAINTY. OPERATIONAL COSTS ARE REDUCED SINCE AREAS WITH FEW COMPETING ACTIVITIES PERMIT MORE EFFICIENT DEPLOYMENT OF THE SYSTEM. VERIFICATION AND PLU ACTIVITIES ARE ENHANCED BECAUSE CONFUSING OR AMBIGUOUS INFORMATION IS MINIMIZED AND SECURITY PROCEDURES ARE FACILITATED IN REMOTE AREAS.

RANGE FROM BORDERS AND COAST

THIS CHART SHOWS THE RELATIONSHIP OF EACH BASING AREA TO 200 MILE LINES FROM THE COAST AND THE SOUTHERN US BORDER.



Range from Borders and Coast.

APPLICATION OF CRITERIA

THE CALIFORNIA AREA WAS NOT SELECTED FOR IN-DEPTH ENVIRONMENTAL ANALYSIS BECAUSE IT DID NOT PROVIDE SUFFICIENT DISTANCE FROM THE COAST. THE WESTERN ARIZONA AND ARIZONA-NEW MEXICO-SW TEXAS AREAS WERE NOT SELECTED FOR FURTHER STUDY DUE TO THEIR PROXIMITY TO AN INTERNATIONAL BORDER.

IN FOLLOWING THE "HORSESHOE" PATTERN FROM NEVADA-UTAH, THROUGH CALIFORNIA, ARIZONA, NEW MEXICO, AND TEXAS, TO THE COLORADO-KANSAS-NEBRASKA AREA, THREE TRENDS WERE EVIDENT. THE PERCENTAGE OF LAND THAT IS PRIVATELY OWNED TENDS TO INCREASE, THE PERCENTAGE OF SUITABLE LAND IN AN AREA THAT HAS VERY LOW POPULATION TENDS TO DECREASE, AND AGRICULTURAL ACTIVITY TENDS TO INCREASE--UNTIL THE FINAL AREA IS ALMOST COMPLETELY PRIVATE, PREDOMINANTLY AGRICULTURAL, AND WITH A POPULATION THAT IS SPREAD RELATIVELY EVENLY OVER THE BASING AREA.

ALL THREE TRENDS ARE INDICATIVE OF INCREASING MILITARY AND OPERATIONAL PROBLEMS ASSOCIATED WITH M-X DEPLOYMENT. THE PROBLEMS CAN BE OVERCOME, BUT THE DIFFICULTIES WILL INCREASE AS ONE MOVES AROUND THE "HORSESHOE." IN THE SIX BASING AREAS CONSIDERED, THE AMOUNT OF AGRICULTURAL LAND TENDED TO BE THE GREATEST DISCRIMINANT IN ASSESSING THE IMPACT OF THE LOCAL AREA AND ACTIVITIES ON THE M-X SYSTEM. AGRICULTURAL ACTIVITIES, WHICH DISTURB THE LAND AND OFTEN ENTAIL USE OF LARGE EQUIPMENT AND FACILITIES, MAKE VERIFICATION AND PRESERVATION OF LOCATION UNCERTAINTY MORE DIFFICULT.

THE POPULATION AND ACTIVITY LEVELS IN ALL SIX AREAS TENDED TO BE COMPATIBLE WITH M-X DEPLOYMENT WITH TWO EXCEPTIONS, BOTH OF WHICH ARE RELATED TO AGRICULTURE.

FIRST, M-X CAN BE DEPLOYED MOST EFFICIENTLY WHERE THERE ARE LARGE AMOUNTS OF ISOLATED LAND. AS A RESULT, THE POPULATION DISTRIBUTION AFFECTS M-X AS WELL AS THE AVERAGE POPULATION DENSITY. IN THE COLORADO-KANSAS-NEBRASKA AREA THE POPULATION IS RELATIVELY MORE DISPERSED THAN THE OTHER AREAS, AND M-X WOULD TEND TO SPREAD OUT IN THAT AREA IN ORDER TO REDUCE THE IMPACT ON THE LOCAL POPULATION. THIS WOULD RESULT IN MORE ROADS TO MAINTAIN, MORE REMOTE SURVEILLANCE SITES, GREATER SECURITY FORCES, AND HIGHER COSTS.

SECOND, WHILE ACTIVITY LEVELS, ON THE AVERAGE, TENDED TO BE COMPATIBLE WITH M-X, PERIODS OF RELATIVELY INTENSE ACTIVITY ASSOCIATED WITH PLANTING, TENDING, AND HARVESTING CROPS HAD TO BE CONSIDERED ALSO. (IN THE PLAINS AREA, MUCH OF THE PLANTING AND HARVESTING IS DONE BY HIRED CREWS, WITH LARGE MACHINERY, WHO MOVE NORTH AS THE SEASONS CHANGE.) PROVIDING SECURITY DURING SUCH PEAK PERIODS OF ACTIVITY--MUCH OF WHICH COULD NOT BE READILY CLASSIFIED AS BENIGN--WOULD FURTHER INCREASE M-X COSTS.

IN ADDITION, BASING IN THE COLORADO-KANSAS-NEBRASKA AREA WOULD BE CONTRARY TO THE SENSE OF CONGRESS THAT M-X SHOULD BE RESTRICTED TO THE LEAST PRODUCTIVE LAND AVAILABLE AND WOULD ENTAIL OPERATIONAL PROBLEMS DUE TO NEARBY HIGH-VALUE TARGETS (AIRBORNE LAUNCH CONTROL CENTER OR ALCC OPERATING AREAS WOULD BE LIMITED AND THE SOVIETS MAY BE ABLE TO TAKE ADVANTAGE OF COLLATERAL DAMAGE EFFECTS).

WHILE INDIVIDUALLY THE PROBLEMS IN THE COLORADO-KANSAS-NEBRASKA AREA (VERIFICATION, PRESERVATION OF LOCATION UNCERTAINTY, SECURITY, COSTS, CONGRESSIONAL CONCERN, AND NEARBY HIGH-VALUE TARGETS) WOULD NOT PRECLUDE M-X DEPLOYMENT, THE PROBLEMS IN TOTO WERE SUFFICIENTLY SERIOUS THAT THE AREA WAS JUDGED TO BE AN UNREASONABLE BASING AREA FOR M-X, AND IT WAS NOT SELECTED FOR FURTHER STUDY.

THE TWO REMAINING AREAS, NEVADA-UTAH AND WEST TEXAS-NEW MEXICO, WERE BOTH CONSIDERED REASONABLE ALTERNATIVES.

APPLICATION OF CRITERIA

AREA	DISTANCE FROM THE COAST (MILES)	DISTANCE FROM BORDERS (MILES)	COMPATIBILITY WITH LOCAL AREA AND ACTIVITIES
NEVADA-UTAH	300-500	300-500	MOSTLY PUBLIC VERY LOW RURAL ACTIVITY AND POPULATION AGRICULTURE CAN BE AVOIDED
CALIFORNIA	LESS THAN 200	50-300	MOSTLY PUBLIC LOW RURAL ACTIVITY AND POPULATION ACCESS FROM LOS ANGELES AGRICULTURE CAN BE AVOIDED
W ARIZONA	200-300	LESS THAN 200	MOSTLY PUBLIC LOW RURAL ACTIVITY AND POPULATION ACCESS FROM YUMA, PHOENIX, AND TUCSON AGRICULTURE CAN BE AVOIDED
ARIZONA, NEW MEXICO, SW TEXAS	400-600	LESS THAN 200	50% PRIVATE LOW RURAL POPULATION AND ACTIVITY AGRICULTURAL CAN BE AVOIDED
W TEXAS, NEW MEXICO	OVER 500	200-400	ALMOST ALL PRIVATE LOW RURAL POPULATION AND ACTIVITY IN NORTHERN PART SOME DEPLOYMENT ON AGRICULTURAL LAND MAY BE NECESSARY
COLORADO, KANSAS, NEBRASKA	OVER 500	OVER 500	ALMOST ALL PRIVATE RELATIVELY HIGH ACTIVITY MOSTLY AGRICULTURAL ALCC CONSTRAINTS POTENTIAL COLLATERAL DAMAGE

SUMMARY EVALUATION OF CANDIDATE BASING AREAS

THIS CHART SUMMARIZES THE PREVIOUS CHART. THE ONLY POTENTIAL BASING AREAS THAT DID NOT ENTAIL UNREASONABLE RISKS OR CONDITIONS WERE NEVADA-UTAH AND WEST-TEXAS-NEW MEXICO. THOSE TWO AREAS WERE SELECTED FOR FURTHER STUDY.

SUMMARY EVALUATION OF CANDIDATE BASING AREAS

CANDIDATE AREA	RISK DUE TO DISTANCE FROM COAST	RISK DUE TO DISTANCE FROM BORDER	COMPATIBILITY WITH LOCAL AREAS AND ACTIVITIES	SELECTED FOR FURTHER STUDY
NEVADA UTAH	REASONABLE	NOT SIGNIFICANT	HIGH	YES
CALIFORNIA	UNREASONABLE	UNREASONABLE IN SOUTHERN HALF	REASONABLE	NO
W. ARIZONA	REASONABLE	UNREASONABLE	REASONABLE	NO
ARIZONA, NEW MEXICO, SW TEXAS	REASONABLE	UNREASONABLE	REASONABLE	NO
WEST TEXAS, NEW MEXICO	NOT SIGNIFICANT	REASONABLE	REASONABLE	YES
COLORADO, KANSAS, NEBRASKA	NOT SIGNIFICANT	NOT SIGNIFICANT	UNREASONABLE	NO